# KENTUCKY FORESTS

*Pennyroyal Unit*

# FOREWORD

More than a decade has elapsed since the last comprehensive inventory of Kentucky's woodlands. Timber cutting, tree growth, and shifts in land use since then have led to several important changes in the timber resource. The demand for forest products has also changed. Recent emphasis on rural area development has made the necessity for fresh statistics even more pressing. Local communities and forest-based industries are finding a greater need for up-to-date data as they plan for future economic development. So, there is an urgent need for new information.

To meet these needs, the Division of Forestry of the Kentucky Department of Natural Resources and the U.S. Forest Service planned and conducted a new inventory of Kentucky forests. The field work was completed in 1964.

The McSweeney-McNary Forest Research Act of 1928 authorizes the Forest Service to complete a statewide forest inventory of Kentucky at approximate 10-year intervals. This is part of the nationwide program of maintaining a current account of our timber resources. The State of Kentucky appropriated $120,000 for the current survey. This contribution, supplementing the Federal funds available for a regular survey, made it possible to intensify the inventory. As a result, we can provide the kind of detailed information needed for making long-range plans to meet future demands and in addition help local communities and forest-based industries make more efficient use of the forest resource.

Clarence D. Chase, Leader of the Survey Project at the Lake States Forest Experiment Station, directed the inventory. Field survey units of the Kentucky Division of Forestry and the Lake States Station collected the basic inventory data. The Lake States Station computed and tabulated the final statistics and the Central States Forest Experiment Station analyzed and reported the results.

Other organizations made important contributions to the new inventory. Personnel of the Eastern Region of the U.S. Forest Service inventoried and provided statistics for the Cumberland National Forest. The Northeastern Forest Experiment Station assisted with the computation of National Forest data. The Tennessee Valley Authority provided men and equipment to assist in surveying areas of their interest. The Soil Conservation Service and the Agricultural Stabilization and Conservation Service provided the field crews with office space and up-to-date aerial photographs. The Kentucky Department of Highways took and provided aerial photographs for parts of eastern Kentucky where no recent photographs were available. The University of Kentucky and Kentucky Department of Commerce took an active part in planning and gave valuable assistance with problems that evolved during the course of the inventory. Our thanks go to all these organizations and others who contributed.

For sampling and reporting purposes, the State was divided into seven survey units (frontispiece). This report covers the Pennyroyal Unit. Additional information regarding the survey can be obtained from either the Division of Forestry, Kentucky Department of Natural Resources, or the Central States Forest Experiment Station.

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# KENTUCKY FORESTS

## *Pennyroyal Unit*

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Prepared in cooperation with

Division of Forestry, Kentucky Department of Natural Resources

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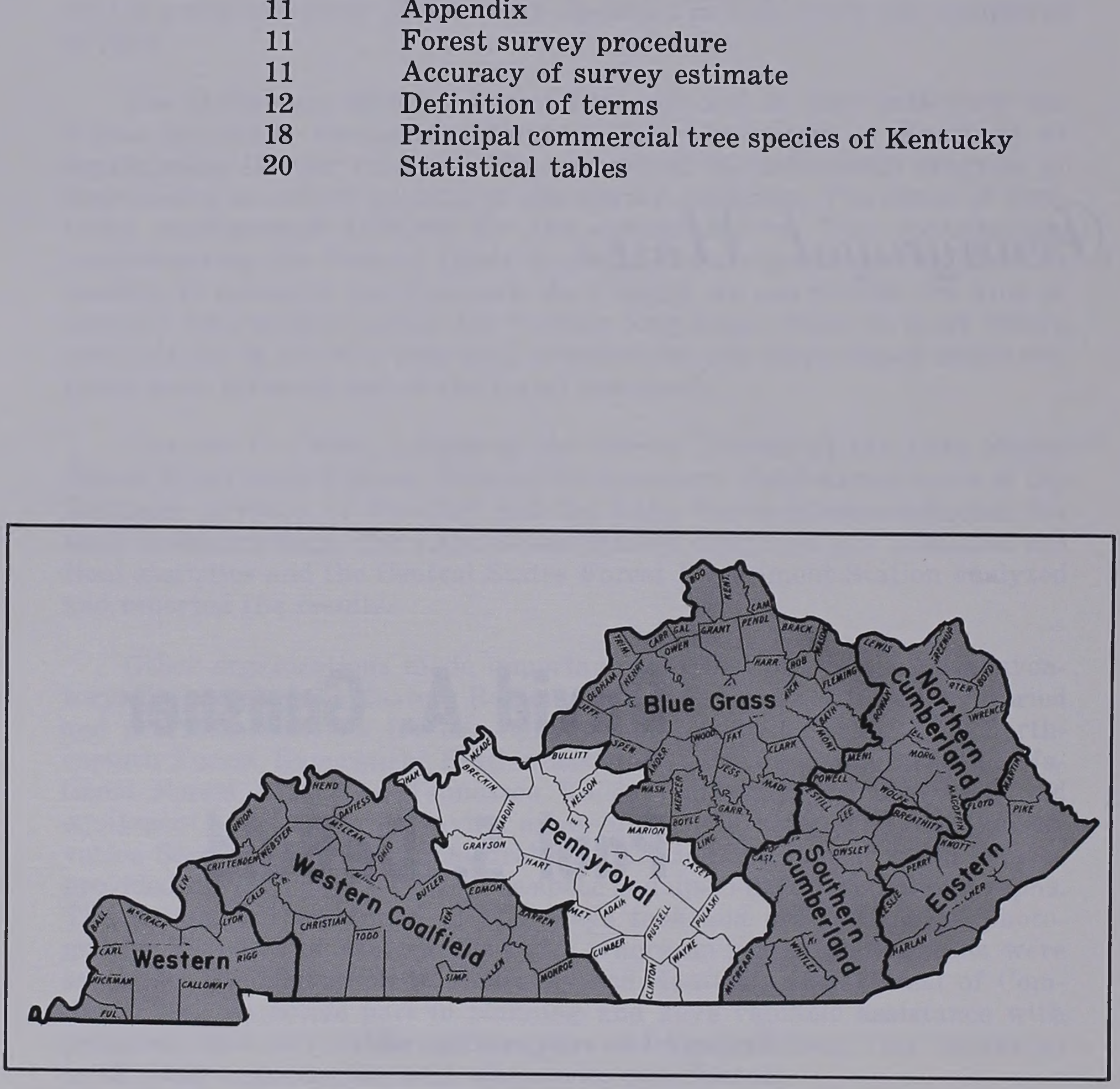


*Location of the Pennyroyal Unit in Kentucky.*

## THE TIMBER RESOURCE HAS CHANGED

The Pennyroyal Unit is a 20-county region of rolling hills in central Kentucky. Most of the area is well drained, with numerous depressions and caverns occurring where soft limestone bedrock has dissolved away (fig. 1). Soils generally are drier here than in most other parts of the State. Because dry soil and hilly topography are not conducive to a highly productive agriculture, it is not surprising that almost half the land area of the region is in forest. The Pennyroyal is more heavily forested than the Blue Grass country to the north and those regions further west, but it is much less so than the rugged hill country to the east.

*FIGURE 1.—Wooded sink holes such as this are a common occurrence in the Pennyroyal Unit.*

There are 2.2 million acres of forest in the region and only about 23,000 acres or 1 percent of it is noncommercial. Most of the noncommercial forest is classified unproductive, i.e., too poor for timber production. The remainder is woodland in State and National parks which has been reserved from cutting.

Commercial forest area has increased about 3 percent from 2,112 to 2,167 thousand acres since 1949 with gains occurring in most of the 20 counties (fig. 2). Much of the increase in forest area was a result of abandoned submarginal fields and pastures becoming restocked with tree cover. This new forest is in a brushy stage of development and has little or no merchantable timber volume. A noticeable loss in forest area occurred in Grayson County where two new reservoirs (Nolin and Rough River) have inundated many acres that were woodland in 1949.

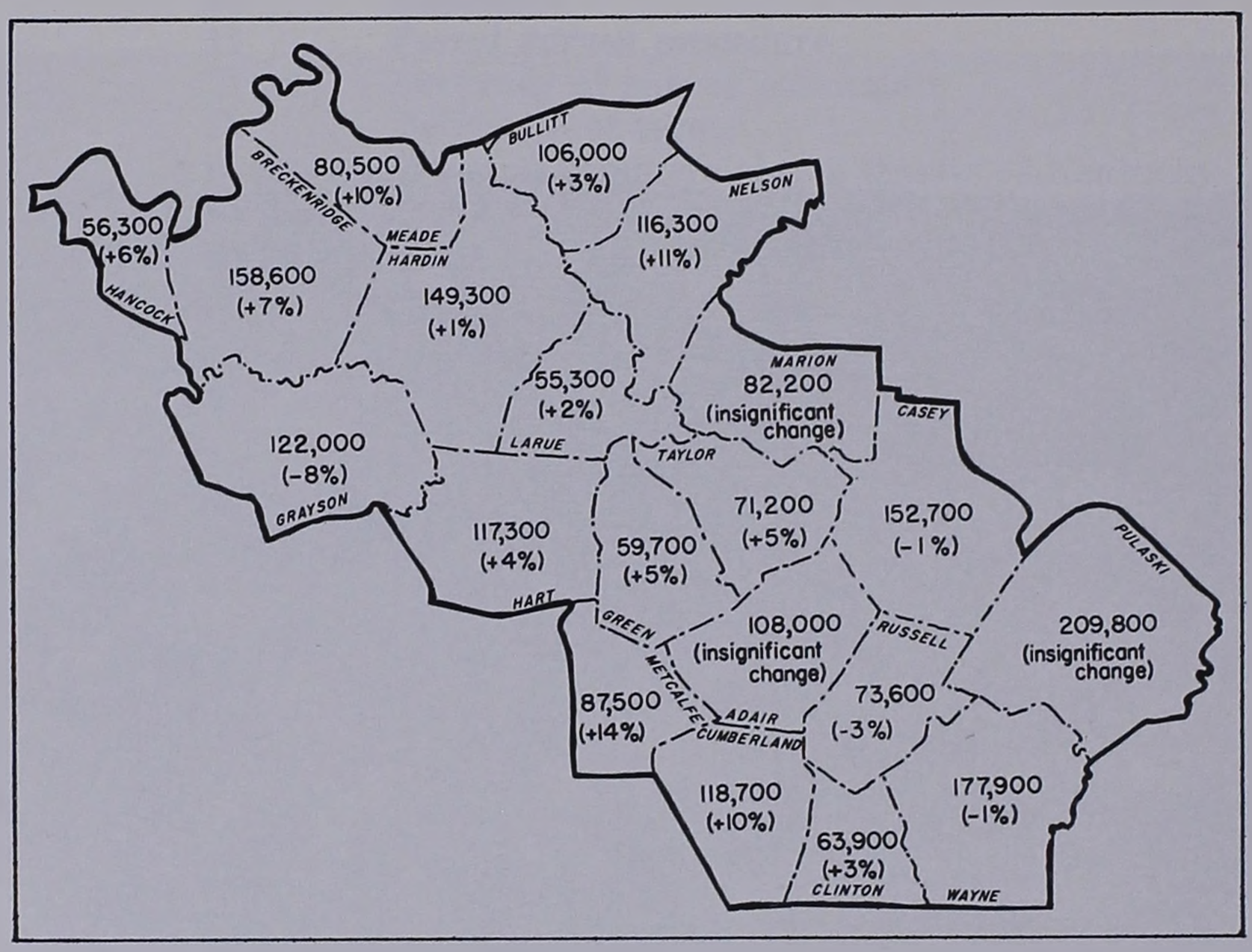


*FIGURE 2.—Acreage of commercial forest land by county, 1963, and percentage change since 1949.*

The pattern of forest-land ownership has not changed significantly since the time of the last survey. About 94 percent of the commercial forest is privately owned and most of the remainder is on Federal land in Fort Knox, the Cumberland National Forest, and holdings of the Corps of Engineers.

Hardwoods predominate in most stands with more than three-fourths of the commercial forest either in the oak-hickory or central mixed hardwood types. Pine stands have increased but they still represent less than 3 percent of the woodland. Almost half of the region's pine forest occurs in Pulaski and Wayne Counties at the southern extremity of Kentucky's pine belt. More than one-third of the State's redcedar-hardwood forests, which are commonly associated with dry sites, are found in this region.

Even though forest area increased, there is less merchantable timber volume now than in 1949. This means that the small amount of growing stock added to the inventory by land shifting into forest plus the natural growth occurring on all stands has not been enough to offset the volume losses from timber harvests, forest land clearing, and mortality. Volume per commercial forest acre averages about 569 cubic feet of growing stock and 1,929 board feet of sawtimber. These averages are 58 cubic feet and 116 board feet less than in 1949.[1]

Decreases in volume were recorded for nearly all sizes of timber (fig. 3). The most important declines took place in trees over 17 inches d.b.h. — the size preferred by most local sawmills, stave mills, and other primary wood-using plants. In 1949 almost 40 percent of the total volume of sawtimber was in trees over 17 inches d.b.h. Now, less than 30 percent is in these sizes. But there is a large base of small, sound growing stock in the region's forest and this volume is currently growing at a much faster rate than it is being cut. Large numbers of poletimber trees are reaching sawtimber size each year. As these trees mature during the next few decades, the volume of large, high-quality saw logs should increase.

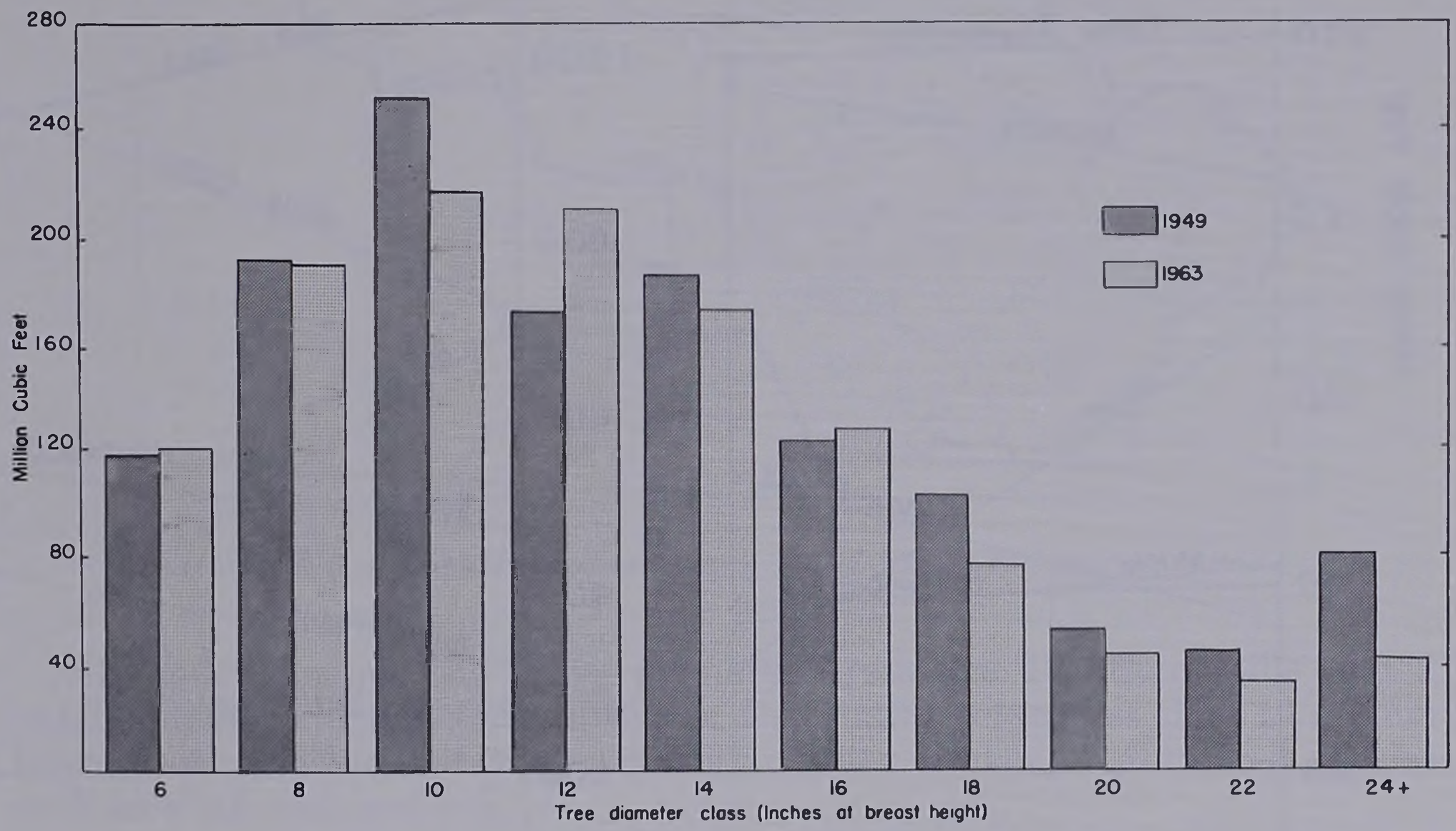


*FIGURE 3.—Change in volume of growing stock by diameter class, 1949-1963.*

[1] The 1949 estimates of growing-stock volume are not directly comparable with those of 1963 because they did not include merchantable material in the upper-stem portion of hardwood sawtimber-size trees. The 1949 data had to be adjusted to permit comparisons.

There have also been some significant changes in the species composition of Pennyroyal forests. The oaks still account for more than 40 percent of the total growing stock, but white oaks have replaced the red oaks as the leading species group (fig. 4). Heavy cutting has led to sharp reductions in the volume of red oak and beech sawtimber. On the other hand, the volumes of some other important timber species such as white oak, yellow-poplar, and hickory made impressive gains (fig. 5).

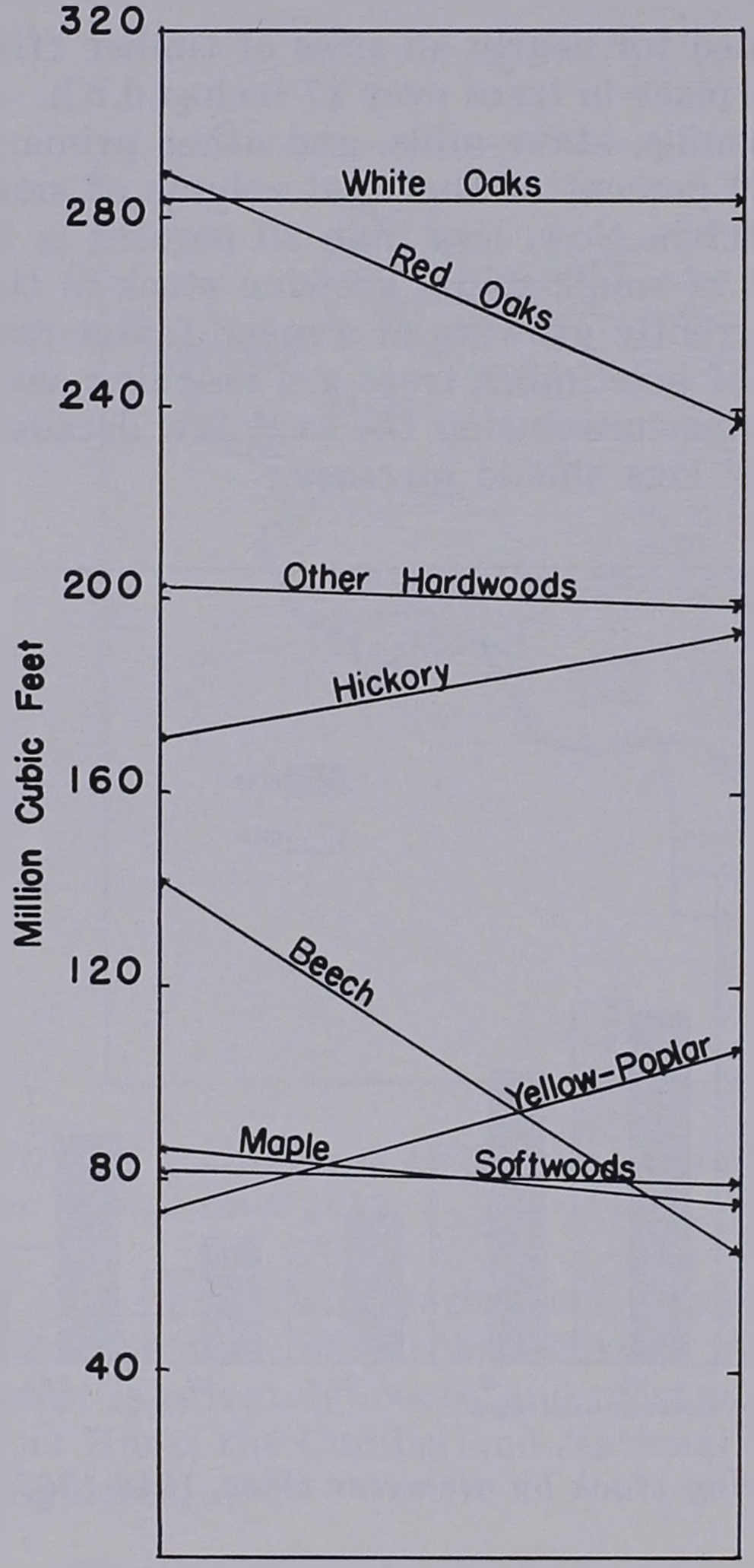


*FIGURE 4.—Change in growing-stock volume by species groups, 1949-1963.*

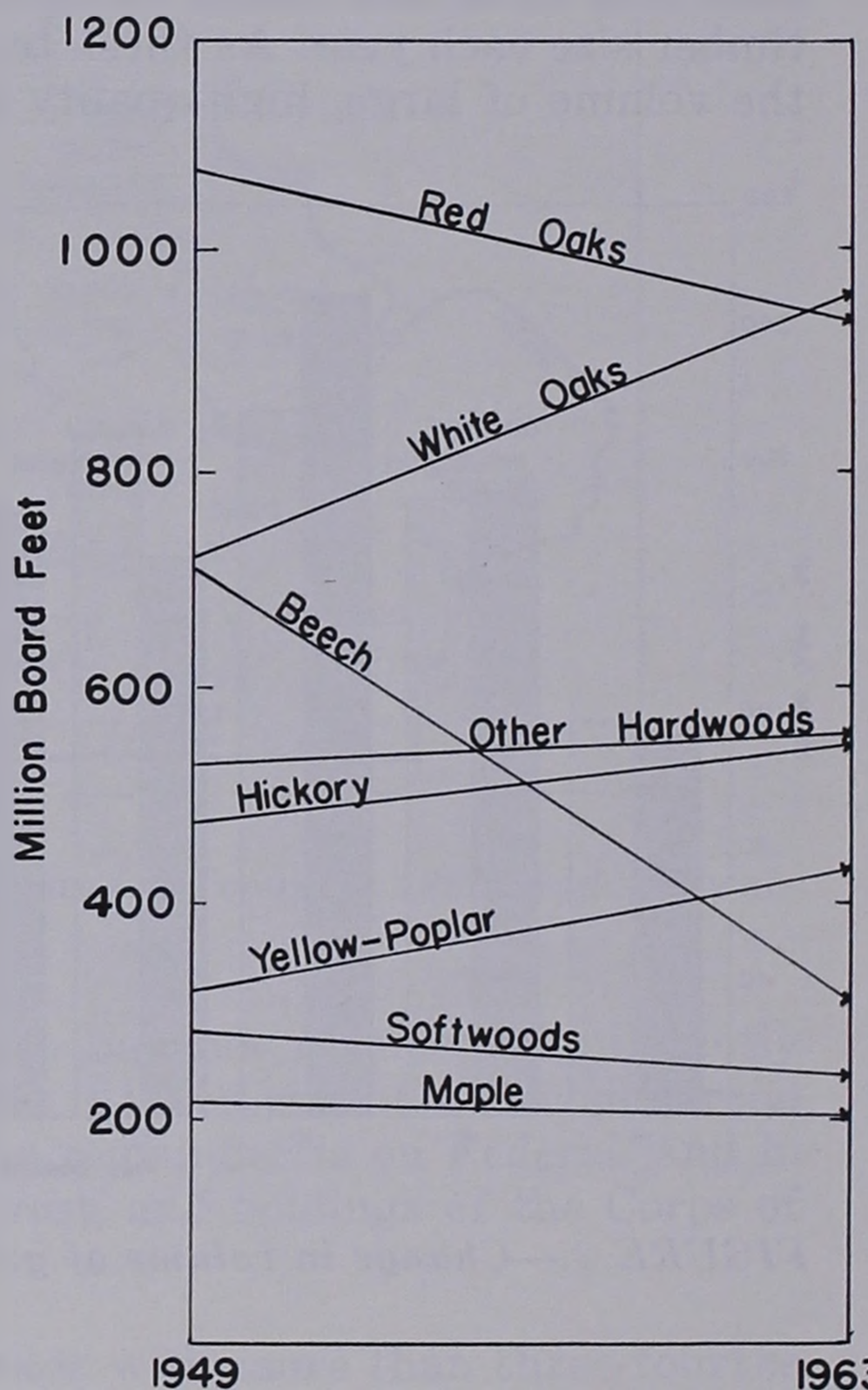


*FIGURE 5.—Change in sawtimber volume by species groups, 1949-1963.*

## TIMBER INDUSTRIES AND DRAIN

More than 29 million cubic feet of growing stock were cut from the Pennyroyal Unit in 1962. This was nearly one-fourth of the total cut in Kentucky that year. Most of the harvest went to local wood-using plants.

There are more than 180 primary wood-using firms in the region and practically all of them are lumber-producing sawmills (fig. 6). Only a few sawmills produce more than a million board feet of lumber per year. In 1962, regional lumber production was about 90 million board feet.

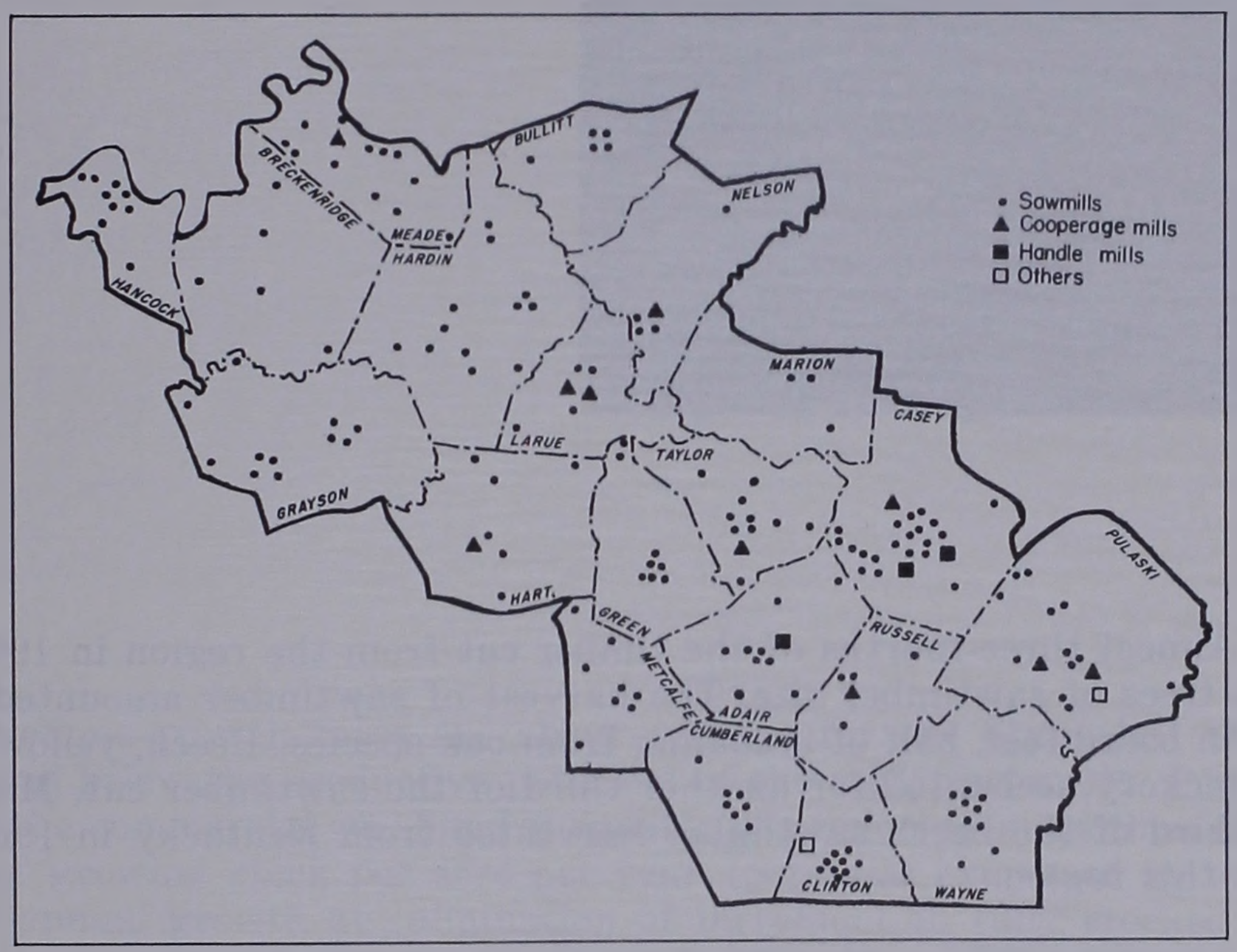


*FIGURE 6.—Location of primary wood-using industries, 1963.*

Included among the other primary firms are 10 stave mills and 3 handle plants. The log consumption of these mills totals less than 10 million board feet per year, but they use high-quality timber of preferred species such as white oak and ash.

The region also has two large charcoal operations at Burnside and Albany producing bulk charcoal and briquettes. Charcoal production has increased rapidly in recent years and the Pennyroyal is now one of the greatest charcoal-producing regions in the Nation (fig. 7).

A small amount of pine pulpwood is harvested from Pulaski and Wayne Counties each year and shipped to mills outside the State. But the pulpwood resource remains virtually untapped and the cut of pulpwood could be increased severalfold.

*FIGURE 7.—This large stack of low-grade hardwood is on its way to the charcoal kiln.*

Almost three-fourths of the timber cut from the region in 1962 came from trees of sawtimber size. The harvest of sawtimber amounted to 133 million board feet, half of it coming from oak species. Beech, yellow-poplar, and hickory accounted for another third of the sawtimber cut. More than one-third of the beech sawtimber harvested from Kentucky in 1962 came from this region.

About 8 million cubic feet of poletimber-size timber were cut and used for charcoal, posts, fuelwood, pulpwood, and other products for which log size is not important. The harvest of poletimber volume was greater in the Pennyroyal than in any other survey unit of the State.

## THE CURRENT BALANCE BETWEEN GROWTH AND CUT

The net annual growth of growing stock in the Pennyroyal Unit is 65 million cubic feet or 5.3 percent of the inventory before allowances are made for cutting (fig. 8). Sawtimber volume is growing at a rate of 306 million board feet or 7.3 percent per year. Growth per commercial forest acre averages 30 cubic feet of growing stock and 141 board feet of sawtimber.

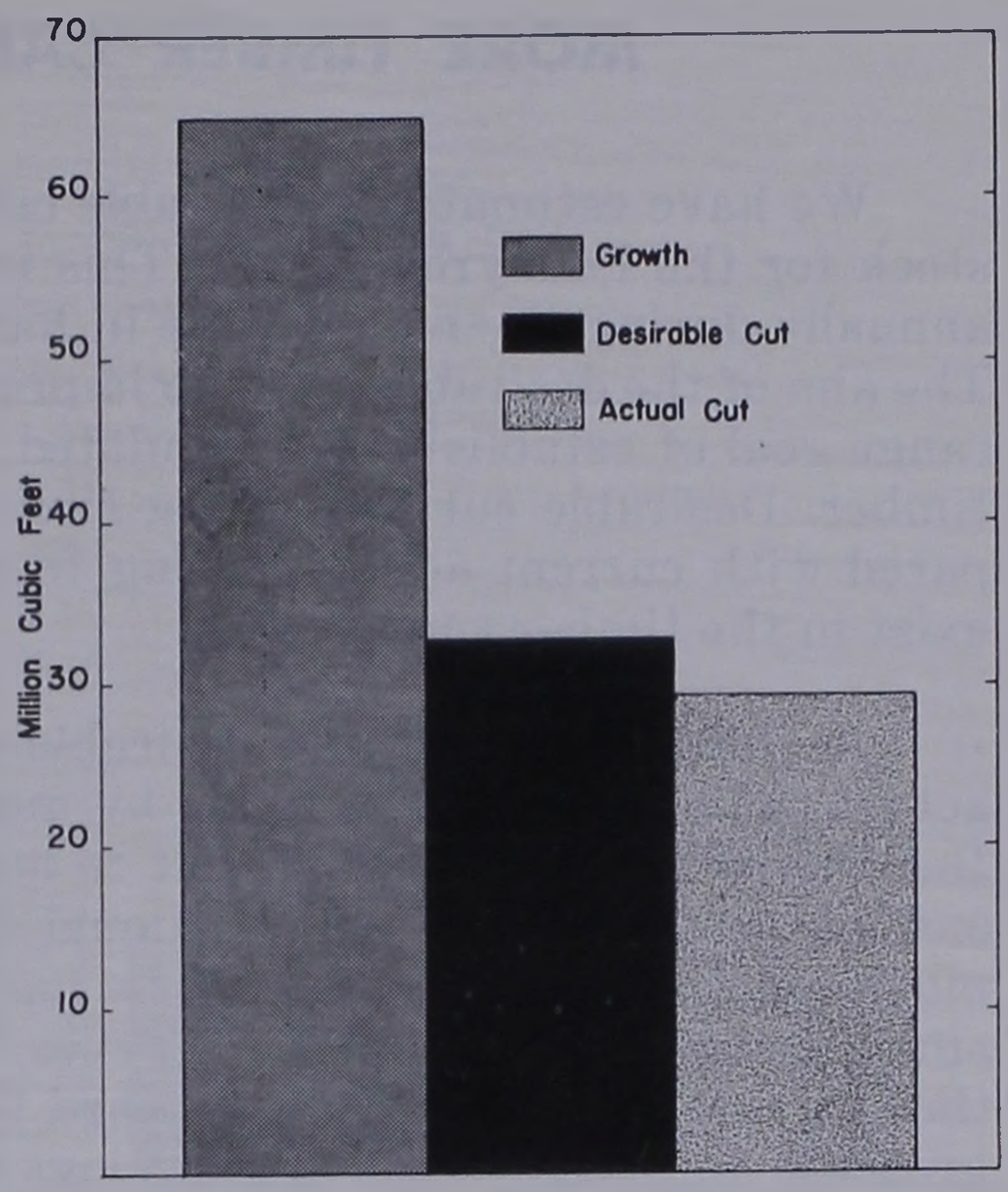


*FIGURE 8. — Growth, desirable cut, and actual cut of growing stock, 1963.*

Volume-growth rates are about average for the State, but they are still well below the productive potential of the region's forests. Practically all of the commercial woodland is capable of producing more than 50 cubic feet of growing stock per acre per year (potential expressed in terms of mean annual growth at culmination of increment in fully stocked stands of desirable trees) and more than half the forest could produce more than 85 cubic feet per acre annually. Productivity of the region's forests could be increased significantly if stocking were improved. Only one-third of the region's forest is well stocked with merchantable or potentially merchantable trees and only 16 percent is in a highly productive condition, i.e., well stocked with desirable trees or expected to attain such stocking in the near future.

Even though timber growth is lower than it might be, it still exceeds the cut. A comparison of current growth (1963) and cutting (1962) data indicates that growing-stock volume is increasing about 3 percent and sawtimber volume about 4 percent annually. Most of the growth is on small trees while most of the cut is from larger, higher quality stock. The ratio of volume growth to volume cut for poletimber is about 5 to 1, but the growth-cut ratio for saw log material is about half as large. With the notable exceptions of the select red oaks and beech, most timber species are growing at a faster rate than they are being cut.

## MORE TIMBER CAN BE HARVESTED

We have estimated a desirable cut of 33 million cubic feet of growing stock for the Pennyroyal Unit. This is the volume that should be removed annually during the next decade in harvest cuts and commercial thinnings. The aim of the desirable cut is to improve timber productivity with the long-range goal of establishing a regulated forest producing a sustained yield of timber. Desirable cut provides a silvicultural standard which can be compared with current actual cutting to show where shortages and surpluses exist in the timber supply.

In the Pennyroyal, the desirable cut of all growing stock exceeds the actual cut (that made in 1962) by more than 3 million cubic feet (fig. 8). But the relation of desirable cut to actual cut is not the same for all sizes and species of timber. An additional 4 million cubic feet, or half again as much poletimber volume, could be harvested each year if markets for this small timber were available. However, the cut of sawtimber volume exceeds the desirable cut by 16 million board feet and the amount of overcutting is greatest for large, high-quality logs of preferred species (fig. 9). Comparisons of desirable cut with actual cut indicate the harvest of sawtimber can be increased for many important species such as white oak and hickory. But it would be good from a silvicultural standpoint to reduce the cut of some others, e.g., select red oak, yellow-poplar, beech, and walnut until the stocking of this timber improves (fig. 10).

*FIGURE 9.—In 1962, the regional cut of sawtimber volume exceeded the recommended cut.*

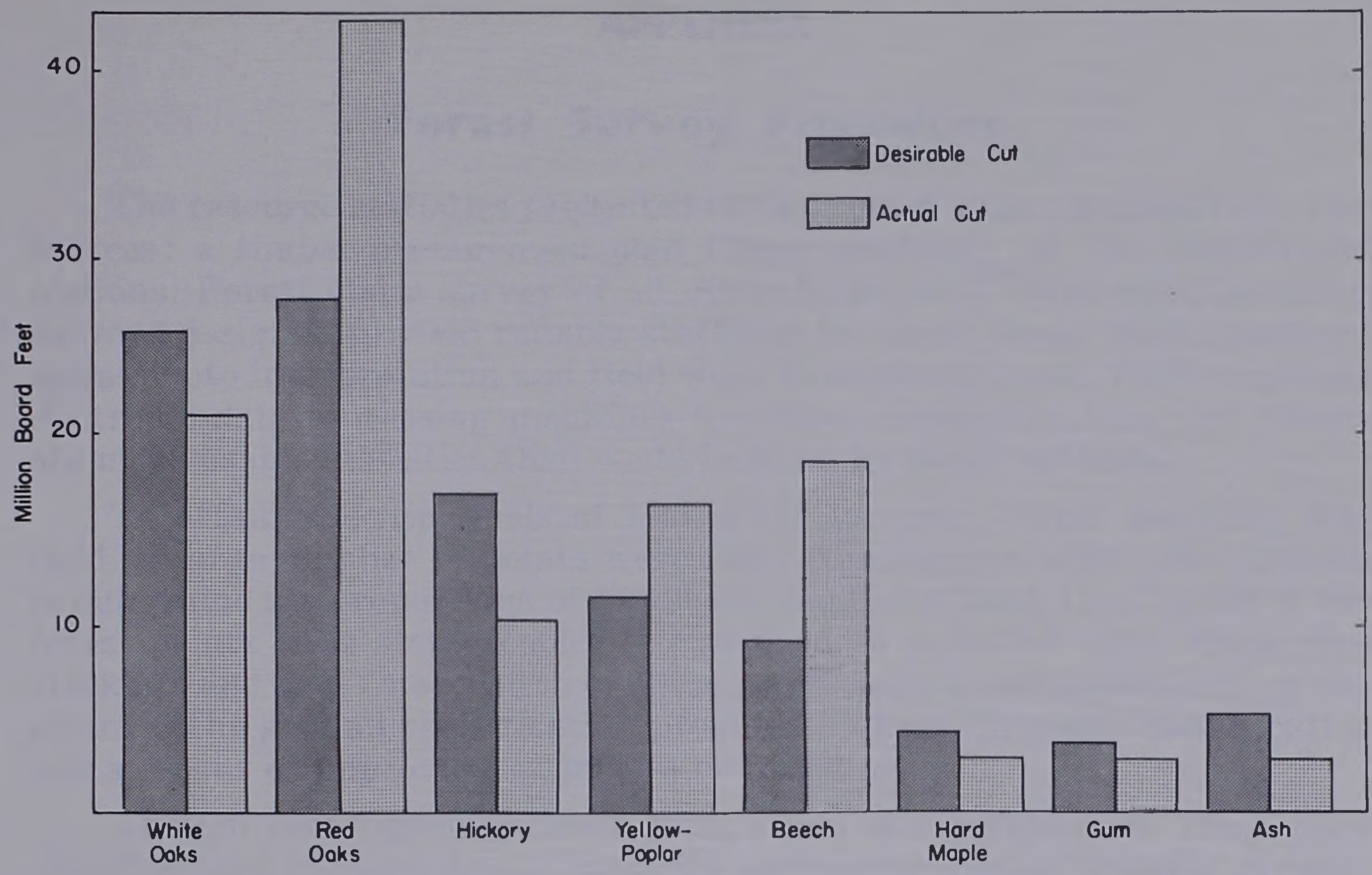


*FIGURE 10.—Desirable cut and actual cut of sawtimber for selected species, 1963.*

# APPENDIX

## Forest Survey Procedure

The resource statistics presented in this report were obtained from two sources: a timber-management-plan forest inventory of the Cumberland National Forest and a survey of all other forest land. Both were sampling surveys designed to yield reliable statistics for large areas. Both combined aerial photo interpretation and field work to minimize costs. Both employed electronic data-processing machines to reduce computing time and generate more usable statistics than could be done by hand methods.

To attain specific levels of statistical accuracy, triple sampling was used. A large number of points were first examined on aerial photographs to determine the proportions of forest and nonforest land. One-fourth of the forest points were stereoscopically classified as to forest type, stand size, stocking, and site. One-twelfth of these points were in turn examined on the ground. The ground classification provided a check on photo classification and a means of improving estimates of forest area.

At each forest ground-check point a plot was established. Trees were classified and measured as a basis for estimating timber volume, growth, mortality, and quality. Ownership was determined for each plot.

Timber-cut information was based on forest-industry production records for 1962, on stump counts at forest-inventory plots, cutting records from large owners, and utilization factors based on a logging-residue study.

## Accuracy of Survey Estimate

Estimates of forest area and timber volume are subject to two kinds of errors: (1) nonsampling errors caused by mistakes in judgment, recording of measurements, or in calculations, and (2) sampling errors inherent in statistical work.

Nonsampling errors are not measurable and cannot be shown. They are avoided as much as possible through training of personnel, close supervision, and careful checking of all phases of the work.

Sampling errors are subject to the laws of chance and may be estimated by statistical methods. These errors are held to acceptable levels commensurate with the values involved and funds available by adjusting the survey design and the intensity of the sample. With a probability of two out of three (that is, relatively good) the accompanying table shows the accuracy of the data presented in this report. The sampling error of a survey is less for a large class or block than for a smaller class or other subdivision. Some of the resource statistics presented in this report have such large errors that it would be unwise to use them alone — but if they are combined with other figures the error may be reduced enough to warrant their use. Weak figures are shown to allow various combinations of data.

*Guides for judging accuracy by size of area and by volume of growing stock and sawtimber*

| Commercial-forest land | Standard error of sampling | Growing-stock volumes | Standard error of sampling | Sawtimber volumes | Standard error of sampling |
|---|---|---|---|---|---|
| *Acres* | *Percent* | *Thousand cu. ft.* | *Percent* | *Thousand bd. ft.* | *Percent* |
| 2,166,800 | 2.0 | 1,232,570 | 3.0 | 4,179,440 | 4.8 |
| 1,000,000 | 2.9 | 1,000,000 | 3.4 | 1,000,000 | 9.8 |
| 500,000 | 4.1 | 500,000 | 4.8 | 500,000 | 13.8 |
| 300,000 | 5.2 | 300,000 | 6.1 | 300,000 | 17.8 |
| 100,000 | 9.1 | 100,000 | 10.6 | 100,000 | 30.9 |
| 50,000 | 12.8 | 50,000 | 15.0 | 50,000 | 43.7 |
| 30,000 | 16.6 | 30,000 | 19.4 | 30,000 | 56.4 |
| 10,000 | 28.7 | 10,000 | 33.6 | 10,000 | 97.7 |
| 5,000 | 40.6 | 5,000 | 47.6 | | |
| 3,000 | 52.4 | | | | |

The occurrence of a (—) in the statistical tables of this report indicates one of two things:

(1) No units were measured by the inventory.

(2) The quantity of data measured was insignificant and did not warrant reporting.

## Definition of Terms

*Land and Forest Area*

*Gross area.* — The entire area of land and water as determined by the Bureau of the Census.

*Land area.* — The area of dry land and land temporarily or partially covered by water such as marshes, swamps, and flood plains; streams, and sloughs less than ⅛ mile wide; and lakes, reservoirs, and ponds less than 40 acres in area.

*Forest land.* — Land at least 10 percent stocked by forest trees of any size, or formerly having such tree cover and not currently developed for nonforest use. Does not include urban or thickly settled residential and resort areas, city parks, orchards, farmsteads, improved roads, or land developed and maintained for nonforest use by fencing, seeding, and so forth. The minimum area for classification of forest land or classes of forest land was 1 acre. Roadside, streamside, and shelterbelt strips of timber having a crown width of at least 120 feet qualified as forest land. Unimproved roads and trails, streams, and clearings in forest land were included as forest if less than 120 feet wide.

*Commercial-forest land.* — Forest land that is producing or capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation.

*Noncommercial-forest land.* — Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions; and productive, public-forest land withdrawn from commercial timber use through statute or administrative regulation.

*Ownership*

*National Forest.* — Federal land that has been designated by Executive order or statute as National Forest, including purchase units; and other land under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III land.

*Other public.* — All publicly owned land other than National Forest.

*Forest industry.* — Land owned by companies or individuals operating wood-using plants.

*Farmer and miscellaneous private.* — All privately owned land except forest industry land.

*Forest Types*

*Forest type.* — A classification of forest land based upon species composition considering all live trees.

*Southern pine.* — Forests in which 50 percent or more of the stocking is shortleaf or other southern yellow pines, singly or in combination.

*Redcedar-hardwoods.* — Forests in which 50 percent or more of the stocking is hardwoods but in which redcedar makes up at least 25 percent of the stocking. Included also are those areas where redcedar makes up most of the stocking.

*Oak-pine.* — Forests in which 50 percent or more of the stocking is hardwoods (usually upland oaks) but in which southern pine makes up at least 25 percent of the stocking.

*White oak.* — Forests in which 50 percent or more of the stocking is white oak, except stands that classify as redcedar-hardwoods or oak-pine.

*Oak-hickory.* — Forests in which 50 percent or more of the stocking is upland oaks or hickories, singly or in combination, except stands that classify as oak-pine, redcedar-hardwoods, or white oak.

*Central mixed hardwoods.* — Forests in which 50 percent or more of the stocking is a combination of hardwood species, principally yellow-poplar, maple, beech, basswood, black walnut, elm, and northern red oak, except stands that classify as redcedar-hardwoods, oak-pine, oak-hickory, maple-beech, or elm-ash-cottonwood.

*Maple-beech.* — Forests in which 50 percent or more of the stocking is maple or beech, singly or in combination, except stands that classify as redcedar-hardwoods or oak-pine.

*Elm-ash-cottonwood.* — Forests in which 50 percent or more of the stocking is elm, ash, or cottonwood, singly or in combination except stands that classify as redcedar-hardwoods or oak-pine.

### *Stand-Size Classes*

*Stand-size class.* — A classification of forest land based on the predominant size of timber present—sawtimber, poletimber, or seedlings and saplings.

*Sawtimber stands.* — Stands at least 10 percent stocked with growing-stock trees, with half or more of this stocking in sawtimber or poletimber trees and with sawtimber stocking at least equal to poletimber stocking.

*Poletimber stands.* — Stands at least 10 percent stocked with growing-stock trees, and with half or more of this stocking in sawtimber and/or poletimber trees and with poletimber stocking exceeding that of sawtimber.

*Seedling-sapling stands.* — Stands at least 10 percent stocked with growing-stock trees and with seedlings and/or saplings comprising more than half of this stocking.

*Nonstocked areas.* — Commercial-forest land less than 10 percent stocked with growing-stock trees.

### *Stocking Classes*

*Stocking class.* — A classification of commercial-forest land based on the percent of area occupied by growing-stock trees. *Growing-stock trees* include all live trees except culls.

*Well stocked.* — Stands that are 70 percent or more stocked with growing-stock trees.

*Medium stocked.* — Stands that are 40 to 69 percent stocked with growing-stock trees.

*Poorly stocked.* — Stands that are from 10 to 39 percent stocked with growing-stock trees.

*Nonstocked.* — Areas of commercial-forest land not qualifying as sawtimber, poletimber, or seedling and sapling stands. These areas may contain some volume but less than 10 percent of the growing space is effectively utilized by growing stock.

*Area-Condition Classes*

A classification of commercial-forest land based upon stocking by desirable growing-stock trees and conditions affecting current and prospective timber growth. *Desirable growing-stock trees* are those that have no serious defects in quality limiting present or prospective use. They have relatively high vigor and contain no pathogens that may result in death or serious deterioration before rotation age. These are the trees that would be favored in silvicultural operations.

*Desirable.* — Areas 70 percent or more stocked with desirable trees.

*Moderate and favorable.* — Areas 40 to 70 percent stocked with desirable trees and with 30 percent or less of the area having other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

*Moderate and unfavorable.* — Areas 40 to 70 percent stocked with desirable trees and with more than 30 percent of the area having other trees and/or inhibiting vegetation or surface conditions that will prevent occupancy by desirable trees.

*Poor but favorable.* — Areas less than 40 percent stocked with desirable trees and with 30 percent or less of the area having other trees and/or inhibiting vegetation or surface conditions that prevent occupancy by desirable trees.

*Poor and unfavorable.* — Areas less than 40 percent stocked with desirable trees and with more than 30 percent of the area having other trees and/or inhibiting vegetation or surface conditions that prevent occupancy by desirable species.

*Volume Classification*

*Growing-stock volume.* — Cubic-foot volume of sound wood in the bole of sawtimber and poletimber trees from the stump to a minimum 4-inch-top diameter outside bark or to the point where the central stem breaks into limbs.

*Sawtimber volume.* — Net volume of the saw-log portion of live sawtimber trees in board feet, International ¼-inch rule. The saw-log portion extends from stump to a minimum top diameter outside bark of 6 inches for softwoods and 8 inches for hardwoods or to the point where defects reduce saw-log quality below Standard Log Grade 3 or Tie-and-Timber Grade.

*Tree-Size Classes*

*Sawtimber trees.* — Live trees of commercial species containing at least an 8-foot saw log. Softwoods must be at least 9 inches and hardwoods at least 11 inches d.b.h. outside bark.

*Poletimber trees.* — Live trees of commercial species at least 5 inches d.b.h. but smaller than sawtimber size, and of good form and vigor.

*Saplings.* — Live trees of commercial species 1 to 5 inches d.b.h. and of good form and vigor.

*Seedlings.* — Live trees of commercial species less than 1 inch d.b.h. that are expected to survive.

*Growth*

*Net annual growth.* — The annual change in volume of sound wood in live sawtimber and poletimber trees and the total volume of trees entering these classes through ingrowth less volume losses resulting from natural causes.

*Growing-stock growth.* — Net annual growth of poletimber and sawtimber trees in cubic feet.

*Sawtimber growth.* — Net annual growth of sawtimber trees in board feet, International ¼-inch rule.

*Timber Cut*

*Timber cut from growing stock.* — The net cubic-foot volume of sound wood in live sawtimber and poletimber trees cut for forest products during a specified year, including both roundwood products and logging residues.

*Timber cut from sawtimber.* — The net board-foot volume of live sawtimber trees cut for forest products during a specified year, including both roundwood products and logging residues.

*Desirable cut (formerly called allowable cut).* — The net volume of live sawtimber and poletimber trees that can be cut annually during the next 10 years in commercial-logging operations while maintaining or increasing growing stock and while effecting a reasonably even distribution of age classes below the rotation age selected for each type. It includes harvest and improvement cuts yielding 3 cords or more per acre, and one-tenth of the entire net volume of stands 10 or more years beyond the rotation age. Desirable cut includes all timber of merchantable size that should be cut from commercial-forest land in order to salvage, rejuvenate, or improve the stands and increase the growth without regard to restraints of ownership, inaccessibility, or the profit motive. Some of this timber may not be available for sale, too hard to get at or too scattered, or of currently unwanted species or quality. More forest products may be obtained by reducing the "forest capital."

*Rotation ages for saw-log trees in extensively managed stands by forest-type and site-index classes*

(In years)

| Forest type | Site index (50-year height in feet)* | | | | | | |
|---|---|---|---|---|---|---|---|
| | 40 | 50 | 60 | 70 | 80 | 90 | 100+ |
| Southern pine | 120 | 110 | 90 | -- | -- | -- | -- |
| Redcedar-hardwoods | 120 | 110 | 90 | -- | -- | -- | -- |
| Oak-pine | 120 | 110 | 90 | -- | -- | -- | -- |
| White oak | 120 | 110 | 90 | 80 | 75 | 70 | -- |
| Oak-hickory | 120 | 110 | 90 | 80 | 75 | 70 | -- |
| Central mixed hardwoods | -- | 110 | 90 | 80 | 75 | 70 | 60 |
| Maple-beech | -- | 100 | 100 | 100 | 100 | -- | -- |
| Oak-gum-cypress | -- | -- | -- | 80 | 75 | 70 | 60 |
| Elm-ash-cottonwood† | -- | -- | -- | 80 | 70 | 60 | 60 |

* Except in the case of cottonwood for which it is total height at 25 years.
† The rotation for cottonwood is half of the age shown.

## *Miscellaneous Definitions*

*Site class.* — A classification of commercial-forest land based on potential yields in cubic feet per acre of mean annual growth at culmination of increment in fully stocked stands of desirable trees.

*D.b.h. (Diameter at breast height).* — Tree diameter in inches measured outside the bark at a point 4½ feet above the ground.

*Diameter class.* — Where data are presented in 2-inch diameter classes, they include diameters from 1.0 inches below to 0.9 inches above the stated midpoint; e.g., trees 5.0 inches to and including 6.9 inches, are included in the 6-inch class.

## Principal Commercial Tree Species of Kentucky[2]

### Softwood Species

| | |
|---|---|
| Cypress (baldcypress) | *Taxodium distichum* (L.) Rich. |
| Hemlock (eastern) | *Tsuga canadensis* (L.) Carr. |
| Pine group includes — | |
| Shortleaf pine | *Pinus echinata* Mill. |
| Other yellow pines: | |
| Pitch pine | *P. rigida* Mill. |
| Virginia pine | *P. virginiana* Mill. |
| White pine (eastern) | *P. strobus* L. |
| Redcedar (eastern) | *Juniperus virginiana* L. |

### Hardwood Species

| | |
|---|---|
| Ash | *Fraxinus* L. species |
| Basswood | *Tilia* L. species |
| Beech (American) | *Fagus grandifolia* Ehrh. |
| Birch (yellow) | *Betula alleghaniensis* Britton |
| Blackgum | *Nyssa* L. species |
| Black walnut | *Juglans nigra* L. |
| Cottonwood (eastern) | *Populus deltoides* Bartr. |
| Hickory | *Carya* Nutt. species |
| Maple (hard) includes — | |
| Black maple | *Acer nigrum* Michx. f. |
| Sugar maple | *A. saccharum* Marsh. |
| Maple (soft) includes — | |
| Boxelder | *A. negundo* L. |
| Red maple | *A. rubrum* var. *rubrum* L. |
| Silver maple | *A. saccharinum* L. |
| Oak group includes — | |
| Select red oaks: | |
| Cherrybark oak | *Quercus falcata* var. *pagodaefolia* Ell. |
| Northern red oak | *Q. rubra* L. |
| Shumard oak | *Q. shumardii* Buckl. |
| Other red oaks: | |
| Black oak | *Q. velutina* Lam. |
| Pin oak | *Q. palustris* Muenchh. |
| Scarlet oak | *Q. coccinea* Muenchh. |
| Shingle oak | *Q. imbricaria* Michx. |
| Southern red oak | *Q. falcata* Michx. |
| Water oak | *Q. nigra* L. |
| Willow oak | *Q. phellos* L. |

[2] The common and scientific names are based on: Little, Elbert L., Jr. CHECK LIST OF NATIVE AND NATURALIZED TREES OF THE UNITED STATES (INCLUDING ALASKA). U.S. Dept. Agr. Handb. 41, 472 pp. 1953.

Select white oaks:
- Bur oak ..... *Q. macrocarpa* Michx.
- Chinkapin oak ..... *Q. muehlenbergii* Engelm.
- Swamp chestnut oak ..... *Q. michauxii* Nutt.
- Swamp white oak ..... *Q. bicolor* Willd.
- White oak ..... *Q. alba* L.

Other white oaks:
- Chestnut oak ..... *Q. prinus* L.
- Overcup oak ..... *Q. lyrata* Walt.
- Post oak ..... *Q. stellata* var. *stellata* Wangenh.
- Sweetgum ..... *Liquidambar styraciflua* L.
- Yellow-poplar ..... *Liriodendron tulipifera* L.

Other hardwoods includes —
- Birch (river) ..... *Betula nigra* L.
- Buckeye (Ohio) ..... *Aesculus glabra* Willd.
- Buckeye (yellow) ..... *A. octandra* Marsh.
- Butternut ..... *Juglans cinerea* L.
- Cherry (black) ..... *Prunus serotina* Ehrh.
- Coffeetree (Kentucky) ..... *Gymnocladus dioicus* (L.) K. Koch.
- Cucumbertree ..... *Magnolia acuminata* L.
- Dogwood (flowering) ..... *Cornus florida* L.
- Elm ..... *Ulmus* L. species
- Hackberry ..... *Celtis occidentalis* L.
- Honeylocust ..... *Gleditsia triacanthos* L.
- Locust (black) ..... *Robinia pseudoacacia* L.
- Mulberry (red) ..... *Morus rubra* L.
- Osage-orange ..... *Maclura pomifera* (Raf.) Schneid.
- Persimmon (common) ..... *Diospyros virginiana* L.
- Sassafras ..... *Sassafras albidum* (Nutt.) Nees
- Sycamore (American) ..... *Platanus occidentalis* L.
- Willow (black) ..... *Salix nigra* Marsh.

# Statistical Tables

The following tables present forest-resource data for the Pennyroyal Unit and each of its 20 counties. Tables 1-7 contain information on land and forest area; tables 8-12 information on numbers of trees and timber volume; and tables 13-18 information on growth, cut, and desirable cut. Data for individual counties are shown in tables 1, 4, 10, 14, and 18.

Table 1.--*Area of land and forest land by counties*
*Pennyroyal Unit, Kentucky, 1963*

| County | Gross area* | Land area* | Forest land | | | Commercial forest as a percent of land area |
|---|---|---|---|---|---|---|
| | | | All forest | Non-commercial | Commercial | |
| | *Acres* | *Acres* | *Acres* | *Acres* | *Acres* | *Percent* |
| Adair | 251,500 | 251,500 | 108,800 | 800 | 108,000 | 42.9 |
| Breckenridge | 366,700 | 362,300 | 160,000 | 1,400 | 158,600 | 43.8 |
| Bullitt | 192,000 | 192,000 | 106,600 | 600 | 106,000 | 55.2 |
| Casey | 278,400 | 278,400 | 153,800 | 1,100 | 152,700 | 54.8 |
| Clinton | 131,800 | 122,200 | 64,400 | 500 | 63,900 | 52.3 |
| Cumberland | 200,300 | 196,500 | 119,800 | 1,100 | 118,700 | 60.4 |
| Grayson | 329,000 | 329,000 | 122,500 | 500 | 122,000 | 37.1 |
| Green | 180,500 | 180,500 | 60,200 | 500 | 59,700 | 33.1 |
| Hancock | 126,700 | 119,700 | 56,800 | 500 | 56,300 | 47.0 |
| Hardin | 394,900 | 394,200 | 150,300 | 1,000 | 149,300 | 37.9 |
| Hart | 272,000 | 272,000 | 122,900 | 5,600 | 117,300 | 43.1 |
| Larue | 166,400 | 166,400 | 55,700 | 400 | 55,300 | 33.2 |
| Marion | 219,500 | 219,500 | 82,800 | 600 | 82,200 | 37.4 |
| Meade | 206,100 | 197,100 | 81,000 | 500 | 80,500 | 40.8 |
| Metcalfe | 189,400 | 189,400 | 88,000 | 500 | 87,500 | 46.2 |
| Nelson | 279,700 | 279,700 | 117,200 | 900 | 116,300 | 41.6 |
| Pulaski | 432,000 | 403,200 | 211,200 | 1,400 | 209,800 | 52.0 |
| Russell | 180,500 | 154,900 | 76,300 | 2,700 | 73,600 | 47.5 |
| Taylor | 181,800 | 181,800 | 71,800 | 600 | 71,200 | 39.2 |
| Wayne | 309,800 | 281,600 | 179,300 | 1,400 | 177,900 | 63.2 |
| Total | 4,889,000 | 4,771,900 | 2,189,400 | 22,600 | 2,166,800 | 45.4 |

* Gross area and land area are from the Bureau of the Census, 1960.

Table 2. -- *Area of commercial-forest land by ownership and stand-size class*
*Pennyroyal Unit, Kentucky, 1963*

(In acres)

| Ownership class | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| National forest | 23,800 | 20,300 | 3,300 | 200 | -- |
| Other public | 113,800 | 71,700 | 13,300 | 24,500 | 4,300 |
| Forest industry | 31,900 | 13,700 | 8,400 | 9,700 | 100 |
| Farmer and miscellaneous private | 1,997,300 | 858,800 | 524,900 | 607,400 | 6,200 |
| All ownerships | 2,166,800 | 964,500 | 549,900 | 641,800 | 10,600 |

Table 3. -- *Area of commercial-forest land by stocking and stand-size class*
*Pennyroyal Unit, Kentucky, 1963*

(In acres)

| Stocking class (percent) | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| 70 or more | 731,500 | 343,500 | 232,000 | 156,000 | -- |
| 40-70 | 1,219,700 | 581,000 | 284,400 | 354,300 | -- |
| 10-40 | 205,000 | 40,000 | 33,500 | 131,500 | -- |
| Less than 10 | 10,600 | -- | -- | -- | 10,600 |
| All classes | 2,166,800 | 964,500 | 549,900 | 641,800 | 10,600 |

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963*

(In acres)

ALL COUNTIES

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 58,200 | 29,900 | 19,600 | 8,700 | -- |
| Redcedar-hardwoods | 190,300 | 20,000 | 51,900 | 114,200 | 4,200 |
| Oak-pine | 48,000 | 17,400 | 15,600 | 15,000 | -- |
| White oak | 66,200 | 33,700 | 16,300 | 16,200 | -- |
| Oak-hickory | 879,500 | 457,400 | 264,900 | 150,800 | 6,400 |
| Central mixed hardwoods | 783,400 | 325,100 | 154,800 | 303,500 | -- |
| Maple-beech | 45,200 | 36,600 | -- | 8,600 | -- |
| Elm-ash-cottonwood | 96,000 | 44,400 | 26,800 | 24,800 | -- |
| All types | 2,166,800 | 964,500 | 549,900 | 641,800 | 10,600 |

ADAIR COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 2,200 | 600 | 1,600 | -- | -- |
| Redcedar-hardwoods | 8,900 | 600 | 1,900 | 6,200 | 200 |
| Oak-pine | 1,600 | 800 | 700 | 100 | -- |
| White oak | 1,800 | 200 | 300 | 1,300 | -- |
| Oak-hickory | 43,600 | 15,300 | 15,500 | 12,100 | 700 |
| Central mixed hardwoods | 42,800 | 12,700 | 9,100 | 21,000 | -- |
| Maple-beech | 1,500 | 1,400 | -- | 100 | -- |
| Elm-ash-cottonwood | 5,600 | 2,000 | 1,700 | 1,900 | -- |
| All types | 108,000 | 33,600 | 30,800 | 42,700 | 900 |

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

BRECKENRIDGE COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 1,500 | 1,000 | 200 | 300 | -- |
| Redcedar-hardwoods | 14,800 | 1,300 | 4,200 | 9,000 | 300 |
| Oak-pine | 2,600 | 400 | 1,000 | 1,200 | -- |
| White oak | 5,900 | 3,300 | 1,500 | 1,100 | -- |
| Oak-hickory | 64,100 | 36,800 | 15,700 | 10,600 | 1,000 |
| Central mixed hardwoods | 58,800 | 26,900 | 10,300 | 21,600 | -- |
| Maple-beech | 4,000 | 3,500 | -- | 500 | -- |
| Elm-ash-cottonwood | 6,900 | 3,400 | 2,000 | 1,500 | -- |
| All types | 158,600 | 76,600 | 34,900 | 45,800 | 1,300 |

BULLITT COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 2,400 | 1,000 | 900 | 500 | -- |
| Redcedar-hardwoods | 7,300 | 1,200 | 1,500 | 4,500 | 100 |
| Oak-pine | 1,400 | 500 | 600 | 300 | -- |
| White oak | 4,100 | 2,200 | 1,000 | 900 | -- |
| Oak-hickory | 46,600 | 24,700 | 15,500 | 6,200 | 200 |
| Central mixed hardwoods | 36,700 | 16,300 | 8,600 | 11,800 | -- |
| Maple-beech | 2,200 | 1,900 | -- | 300 | -- |
| Elm-ash-cottonwood | 5,300 | 2,800 | 1,600 | 900 | -- |
| All types | 106,000 | 50,600 | 29,700 | 25,400 | 300 |

CASEY COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 1,300 | 400 | 700 | 200 | -- |
| Redcedar-hardwoods | 8,400 | 1,800 | 2,700 | 3,700 | 200 |
| Oak-pine | 2,100 | 500 | 1,000 | 600 | -- |
| White oak | 6,200 | 3,500 | 1,700 | 1,000 | -- |
| Oak-hickory | 69,300 | 38,300 | 21,700 | 8,800 | 500 |
| Central mixed hardwoods | 54,900 | 26,500 | 11,900 | 16,500 | -- |
| Maple-beech | 3,500 | 2,700 | -- | 800 | -- |
| Elm-ash-cottonwood | 7,000 | 3,400 | 2,300 | 1,300 | -- |
| All types | 152,700 | 77,100 | 42,000 | 32,900 | 700 |

CLINTON COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 1,400 | 900 | 300 | 200 | -- |
| Redcedar-hardwoods | 4,300 | 1,100 | 1,700 | 1,400 | 100 |
| Oak-pine | 900 | 300 | 300 | 300 | -- |
| White oak | 1,800 | 1,100 | 400 | 300 | -- |
| Oak-hickory | 28,000 | 16,000 | 8,400 | 3,600 | -- |
| Central mixed hardwoods | 22,900 | 10,100 | 4,600 | 8,200 | -- |
| Maple-beech | 1,700 | 1,100 | -- | 600 | -- |
| Elm-ash-cottonwood | 2,900 | 1,400 | 700 | 800 | -- |
| All types | 63,900 | 32,000 | 16,400 | 15,400 | 100 |

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

CUMBERLAND COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 1,900 | 100 | 1,600 | 200 | -- |
| Redcedar-hardwoods | 8,500 | 900 | 2,300 | 5,200 | 100 |
| Oak-pine | 3,000 | 800 | 1,000 | 1,200 | -- |
| White oak | 3,200 | 1,200 | 1,000 | 1,000 | -- |
| Oak-hickory | 49,800 | 24,000 | 15,400 | 10,100 | 300 |
| Central mixed hardwoods | 45,400 | 16,800 | 9,900 | 18,700 | -- |
| Maple-beech | 2,600 | 2,300 | -- | 300 | -- |
| Elm-ash-cottonwood | 4,300 | 2,000 | 1,200 | 1,100 | -- |
| All types | 118,700 | 48,100 | 32,400 | 37,800 | 400 |

GRAYSON COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 2,700 | 1,400 | 1,000 | 300 | -- |
| Redcedar-hardwoods | 13,900 | 800 | 2,700 | 10,100 | 300 |
| Oak-pine | 2,100 | 600 | 800 | 700 | -- |
| White oak | 3,600 | 1,700 | 700 | 1,200 | -- |
| Oak-hickory | 45,200 | 22,400 | 12,400 | 9,600 | 800 |
| Central mixed hardwoods | 46,900 | 18,100 | 7,400 | 21,400 | -- |
| Maple-beech | 2,000 | 1,600 | -- | 400 | -- |
| Elm-ash-cottonwood | 5,600 | 2,200 | 1,700 | 1,700 | -- |
| All types | 122,000 | 48,800 | 26,700 | 45,400 | 1,100 |

GREEN COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 800 | 200 | 400 | 200 | -- |
| Redcedar-hardwoods | 4,900 | 700 | 1,500 | 2,500 | 200 |
| Oak-pine | 900 | 300 | 200 | 400 | -- |
| White oak | 2,000 | 1,300 | 400 | 300 | -- |
| Oak-hickory | 24,100 | 13,500 | 6,800 | 3,800 | -- |
| Central mixed hardwoods | 22,900 | 9,400 | 3,900 | 9,600 | -- |
| Maple-beech | 1,500 | 1,100 | -- | 400 | -- |
| Elm-ash-cottonwood | 2,600 | 1,200 | 600 | 800 | -- |
| All types | 59,700 | 27,700 | 13,800 | 18,000 | 200 |

HANCOCK COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 700 | 100 | 500 | 100 | -- |
| Redcedar-hardwoods | 3,900 | 500 | 1,000 | 2,300 | 100 |
| Oak-pine | 600 | 300 | 100 | 200 | -- |
| White oak | 1,200 | 400 | 300 | 500 | -- |
| Oak-hickory | 22,200 | 10,000 | 7,500 | 4,700 | -- |
| Central mixed hardwoods | 22,500 | 9,100 | 3,900 | 9,500 | -- |
| Maple-beech | 1,000 | 700 | -- | 300 | -- |
| Elm-ash-cottonwood | 4,200 | 2,300 | 900 | 1,000 | -- |
| All types | 56,300 | 23,400 | 14,200 | 18,600 | 100 |

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

HARDIN COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 2,600 | 1,300 | 1,000 | 300 | -- |
| Redcedar-hardwoods | 12,500 | 1,300 | 3,100 | 7,700 | 400 |
| Oak-pine | 2,800 | 1,000 | 700 | 1,100 | -- |
| White oak | 4,300 | 1,900 | 1,300 | 1,100 | -- |
| Oak-hickory | 60,300 | 31,200 | 18,700 | 10,000 | 400 |
| Central mixed hardwoods | 55,900 | 22,700 | 10,100 | 23,100 | -- |
| Maple-beech | 3,200 | 2,600 | -- | 600 | -- |
| Elm-ash-cottonwood | 7,700 | 3,100 | 2,200 | 2,400 | -- |
| All types | 149,300 | 65,100 | 37,100 | 46,300 | 800 |

HART COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 1,200 | 600 | 400 | 200 | -- |
| Redcedar-hardwoods | 9,400 | 1,100 | 2,100 | 6,000 | 200 |
| Oak-pine | 1,400 | 400 | 500 | 500 | -- |
| White oak | 3,400 | 1,900 | 900 | 600 | -- |
| Oak-hickory | 50,400 | 23,700 | 13,700 | 12,000 | 1,000 |
| Central mixed hardwoods | 42,900 | 18,500 | 7,800 | 16,600 | -- |
| Maple-beech | 2,500 | 2,100 | -- | 400 | -- |
| Elm-ash-cottonwood | 6,100 | 3,200 | 1,800 | 1,100 | -- |
| All types | 117,300 | 51,500 | 27,200 | 37,400 | 1,200 |

LARUE COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 900 | 500 | 200 | 200 | -- |
| Redcedar-hardwoods | 4,100 | 600 | 1,200 | 2,100 | 200 |
| Oak-pine | 800 | 200 | 300 | 300 | -- |
| White oak | 1,900 | 1,200 | 500 | 200 | -- |
| Oak-hickory | 23,700 | 14,000 | 7,000 | 2,600 | 100 |
| Central mixed hardwoods | 20,300 | 9,400 | 3,500 | 7,400 | -- |
| Maple-beech | 1,300 | 1,000 | -- | 300 | -- |
| Elm-ash-cottonwood | 2,300 | 1,200 | 600 | 500 | -- |
| All types | 55,300 | 28,100 | 13,300 | 13,600 | 300 |

MARION COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 1,100 | 300 | 700 | 100 | -- |
| Redcedar-hardwoods | 7,500 | 500 | 2,600 | 4,200 | 200 |
| Oak-pine | 1,300 | 400 | 400 | 500 | -- |
| White oak | 2,400 | 600 | 500 | 1,300 | -- |
| Oak-hickory | 33,600 | 15,100 | 11,800 | 6,500 | 200 |
| Central mixed hardwoods | 31,400 | 12,000 | 6,800 | 12,600 | -- |
| Maple-beech | 1,100 | 1,000 | -- | 100 | -- |
| Elm-ash-cottonwood | 3,800 | 1,400 | 1,200 | 1,200 | -- |
| All types | 82,200 | 31,300 | 24,000 | 26,500 | 400 |

Table 4.--*Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963--Continued*

(In acres)

MEADE COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 2,900 | 2,200 | 500 | 200 | -- |
| Redcedar-hardwoods | 7,800 | 500 | 2,200 | 4,900 | 200 |
| Oak-pine | 1,600 | 400 | 800 | 400 | -- |
| White oak | 2,400 | 1,000 | 600 | 800 | -- |
| Oak-hickory | 32,700 | 16,200 | 11,000 | 5,500 | -- |
| Central mixed hardwoods | 27,900 | 11,200 | 6,300 | 10,400 | -- |
| Maple-beech | 1,200 | 1,100 | -- | 100 | -- |
| Elm-ash-cottonwood | 4,000 | 1,800 | 900 | 1,300 | -- |
| All types | 80,500 | 34,400 | 22,300 | 23,600 | 200 |

METCALFE COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 2,100 | 800 | 1,000 | 300 | -- |
| Redcedar-hardwoods | 6,500 | 1,000 | 1,400 | 3,900 | 200 |
| Oak-pine | 1,300 | 600 | 300 | 400 | -- |
| White oak | 3,000 | 1,800 | 800 | 400 | -- |
| Oak-hickory | 37,500 | 20,800 | 11,900 | 4,800 | -- |
| Central mixed hardwoods | 31,100 | 13,500 | 7,100 | 10,500 | -- |
| Maple-beech | 1,800 | 1,200 | -- | 600 | -- |
| Elm-ash-cottonwood | 4,200 | 1,900 | 1,200 | 1,100 | -- |
| All types | 87,500 | 41,600 | 23,700 | 22,000 | 200 |

NELSON COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 4,600 | 3,000 | 800 | 800 | -- |
| Redcedar-hardwoods | 13,500 | 1,100 | 5,800 | 6,300 | 300 |
| Oak-pine | 2,000 | 800 | 400 | 800 | -- |
| White oak | 3,400 | 2,000 | 800 | 600 | -- |
| Oak-hickory | 41,700 | 23,600 | 11,300 | 6,800 | -- |
| Central mixed hardwoods | 44,600 | 18,000 | 8,500 | 18,100 | -- |
| Maple-beech | 2,500 | 2,000 | -- | 500 | -- |
| Elm-ash-cottonwood | 4,000 | 1,800 | 900 | 1,300 | -- |
| All types | 116,300 | 52,300 | 28,500 | 35,200 | 300 |

PULASKI COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 14,500 | 8,500 | 4,100 | 1,900 | -- |
| Redcedar-hardwoods | 19,100 | 1,800 | 4,400 | 12,600 | 300 |
| Oak-pine | 13,000 | 6,900 | 4,400 | 1,700 | -- |
| White oak | 6,800 | 4,000 | 1,800 | 1,000 | -- |
| Oak-hickory | 80,600 | 49,300 | 19,800 | 10,900 | 600 |
| Central mixed hardwoods | 64,100 | 30,400 | 10,900 | 22,800 | -- |
| Maple-beech | 4,900 | 4,200 | -- | 700 | -- |
| Elm-ash-cottonwood | 6,800 | 3,400 | 1,900 | 1,500 | -- |
| All types | 209,800 | 108,500 | 47,300 | 53,100 | 900 |

Table 4. -- *Area of commercial-forest land by forest type and stand-size class by county*
*Pennyroyal Unit, Kentucky, 1963 -- Continued*

(In acres)

RUSSELL COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern pine | 900 | 100 | 700 | 100 | -- |
| Redcedar-hardwoods | 5,200 | 500 | 1,500 | 3,000 | 200 |
| Oak-pine | 1,300 | 500 | 400 | 400 | -- |
| White oak | 2,100 | 800 | 400 | 900 | -- |
| Oak-hickory | 32,700 | 13,400 | 12,200 | 6,800 | 300 |
| Central mixed hardwoods | 26,600 | 8,500 | 7,000 | 11,100 | -- |
| Maple-beech | 800 | 600 | -- | 200 | -- |
| Elm-ash-cottonwood | 4,000 | 1,700 | 1,200 | 1,100 | -- |
| All types | 73,600 | 26,100 | 23,400 | 23,600 | 500 |

TAYLOR COUNTY

| Forest type | All stands | Saw-timber | Pole-timber | Seedlings and saplings | Non-stocked |
|---|---|---|---|---|---|
| Southern pine | 900 | 300 | 400 | 200 | -- |
| Redcedar-hardwoods | 5,300 | 1,100 | 1,400 | 2,600 | 200 |
| Oak-pine | 1,100 | 500 | 300 | 300 | -- |
| White oak | 2,400 | 1,400 | 500 | 500 | -- |
| Oak-hickory | 30,100 | 17,200 | 8,700 | 4,100 | 100 |
| Central mixed hardwoods | 26,700 | 11,900 | 5,100 | 9,700 | -- |
| Maple-beech | 1,800 | 1,200 | -- | 600 | -- |
| Elm-ash-cottonwood | 2,900 | 1,400 | 700 | 800 | -- |
| All types | 71,200 | 35,000 | 17,100 | 18,800 | 300 |

WAYNE COUNTY

| | | | | | |
|---|---|---|---|---|---|
| Southern-pine | 11,600 | 6,600 | 2,600 | 2,400 | -- |
| Redcedar-hardwoods | 24,500 | 1,600 | 6,700 | 16,000 | 200 |
| Oak-pine | 6,200 | 1,200 | 1,400 | 3,600 | -- |
| White oak | 4,300 | 2,200 | 900 | 1,200 | -- |
| Oak-hickory | 63,300 | 31,900 | 19,900 | 11,300 | 200 |
| Central mixed hardwoods | 58,100 | 23,100 | 12,100 | 22,900 | -- |
| Maple-beech | 4,100 | 3,300 | -- | 800 | -- |
| Elm-ash-cottonwood | 5,800 | 2,800 | 1,500 | 1,500 | -- |
| All types | 177,900 | 72,700 | 45,100 | 59,700 | 400 |

Table 5. -- *Area of commercial-forest land by forest type and site class*
*Pennyroyal Unit, Kentucky, 1963*

(In acres)

| Forest type | All sites | Site class (potential growth per acre per year in cubic feet) | | | |
|---|---|---|---|---|---|
| | | 120 or more | 85 to 120 | 50 to 85 | Less than 50 |
| Southern pine | 58,200 | 200 | 18,100 | 39,900 | -- |
| Redcedar-hardwoods | 190,300 | -- | 161,100 | 29,200 | -- |
| Oak-pine | 48,000 | 700 | 24,400 | 13,200 | 9,700 |
| White oak | 66,200 | 100 | 52,500 | 13,600 | -- |
| Oak-hickory | 879,500 | 1,400 | 523,800 | 341,600 | 12,700 |
| Central mixed hardwoods | 783,400 | 200 | 314,200 | 401,600 | 67,400 |
| Maple-beech | 45,200 | -- | 21,200 | 13,800 | 10,200 |
| Elm-ash-cottonwood | 96,000 | -- | 31,400 | 59,700 | 4,900 |
| All types | 2,166,800 | 2,600 | 1,146,700 | 912,600 | 104,900 |

Table 6.--*Area of commercial-forest land by forest type and stand-age class*
*Pennyroyal Unit, Kentucky, 1963*

(In acres by age in years)

| Forest type | All ages | Less than 9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-79 | 80-99 | 100 or more |
|---|---|---|---|---|---|---|---|---|---|---|
| Southern pine | 58,200 | -- | 3,800 | 11,000 | 9,500 | 28,700 | 200 | 500 | 4,400 | 100 |
| Redcedar-hardwoods | 190,300 | 13,100 | 41,500 | 39,200 | 32,000 | 17,800 | 24,100 | 22,600 | -- | -- |
| Oak-pine | 48,000 | -- | 2,800 | 13,800 | 11,600 | 10,400 | 3,000 | 5,400 | 800 | 200 |
| White oak | 66,200 | -- | -- | 21,700 | 13,100 | 7,500 | 12,700 | 4,600 | 100 | 6,500 |
| Oak-hickory | 879,500 | 15,000 | 36,500 | 96,100 | 151,300 | 182,100 | 160,500 | 105,400 | 81,500 | 51,100 |
| Central mixed hardwoods | 783,400 | 24,000 | 106,400 | 179,100 | 172,400 | 92,300 | 77,600 | 77,800 | 29,500 | 24,300 |
| Maple-beech | 45,200 | -- | -- | 4,200 | 13,900 | 5,600 | 5,700 | 11,800 | -- | 4,000 |
| Elm-ash-cottonwood | 96,000 | 4,700 | 13,400 | 15,200 | 30,600 | 19,300 | 8,500 | -- | 4,300 | -- |
| All types | 2,166,800 | 56,800 | 204,400 | 380,300 | 434,400 | 363,700 | 292,300 | 228,100 | 120,600 | 86,200 |

Table 7.--*Area of commercial-forest land by forest type and area-condition class*
*Pennyroyal Unit, Kentucky, 1963*

(In acres)

| Forest type | All area conditions | Desirable | Moderate and favorable | Moderate and unfavorable | Poor but favorable | Poor and unfavorable |
|---|---|---|---|---|---|---|
| Southern pine | 58,200 | 100 | 10,900 | 700 | 12,200 | 34,300 |
| Redcedar-hardwoods | 190,300 | 4,400 | 45,100 | 13,600 | 18,500 | 108,700 |
| Oak-pine | 48,000 | 600 | 9,200 | 12,300 | 1,400 | 24,500 |
| White oak | 66,200 | 3,300 | 20,500 | 300 | 17,200 | 24,900 |
| Oak-hickory | 879,500 | 10,000 | 121,200 | 134,100 | 75,800 | 538,400 |
| Central mixed hardwoods | 783,400 | 15,100 | 80,900 | 114,500 | 110,600 | 462,300 |
| Maple-beech | 45,200 | -- | -- | -- | 2,700 | 42,500 |
| Elm-ash-cottonwood | 96,000 | -- | 17,100 | 7,800 | 17,300 | 53,800 |
| All types | 2,166,800 | 33,500 | 304,900 | 283,300 | 255,700 | 1,289,400 |

Table 8.--*Number of growing-stock trees on commercial-forest land by diameter class and species group*
*Pennyroyal Unit, Kentucky, 1963*

(In thousand trees)

| D.b.h. class (inches) | All species | Softwoods | Hardwoods |
|---|---|---|---|
| 2 | 347,600 | 38,970 | 308,630 |
| 4 | 141,400 | 17,900 | 123,500 |
| 6 | 68,700 | 8,110 | 60,590 |
| 8 | 41,640 | 4,060 | 37,580 |
| 10 | 26,340 | 2,180 | 24,160 |
| 12 | 16,420 | 910 | 15,510 |
| 14 | 9,130 | 440 | 8, 690 |
| 16 | 4,860 | 160 | 4,700 |
| 18 | 2,290 | 70 | 2,220 |
| 20 | 980 | 10 | 970 |
| 22 | 630 | -- | 630 |
| 24+ | 620 | -- | 620 |
| All diameter classes | 660,610 | 72,810 | 587,800 |

Table 9.--*Volume of growing stock and sawtimber on commercial-forest land by ownership and species group*
*Pennyroyal Unit, Kentucky, 1963*

| Ownership class | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwoods | Hardwoods | All species | Softwoods | Hardwoods |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| National forest | 26,390 | 8,490 | 17,900 | 67,200 | 24,570 | 42,630 |
| Other public | 138,900 | 67,180 | 71,720 | 304,640 | 8,110 | 296,530 |
| Forest industry | 19,170 | 840 | 18,330 | 72,360 | 2,610 | 69,750 |
| Farmer and miscellaneous private | 1,048,110 | 2,140 | 1,045,970 | 3,735,240 | 205,850 | 3,529,390 |
| All ownerships | 1,232,570 | 78,650 | 1,153,920 | 4,179,440 | 241,140 | 3,938,300 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
*Pennyroyal Unit, Kentucky, 1963*

ALL COUNTIES

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 14,160 | 4,880 | 9,280 | 40,890 | 31,640 | 9,250 |
| Other yellow pines | 42,510 | 12,830 | 29,680 | 175,410 | 120,320 | 55,090 |
| Hemlock | 20 | -- | 20 | 60 | 60 | -- |
| Redcedar | 21,960 | 15,230 | 6,730 | 24,780 | 8,560 | 16,220 |
| Total softwoods | 78,650 | 32,940 | 45,710 | 241,140 | 160,580 | 80,560 |
| Hardwoods: | | | | | | |
| Select white oak | 188,910 | 76,750 | 112,160 | 651,590 | 474,860 | 176,730 |
| Select red oak | 58,240 | 14,880 | 43,360 | 265,860 | 208,780 | 57,080 |
| Other white oak | 92,870 | 38,950 | 53,920 | 303,050 | 231,070 | 71,980 |
| Other red oak | 178,810 | 65,940 | 112,870 | 665,500 | 503,130 | 162,370 |
| Hickories | 192,070 | 95,870 | 96,200 | 551,070 | 412,110 | 138,960 |
| Hard maple | 51,530 | 26,260 | 25,270 | 146,040 | 132,460 | 13,580 |
| Beech | 63,920 | 12,380 | 51,540 | 310,880 | 259,080 | 51,800 |
| Black walnut | 19,050 | 9,450 | 9,600 | 48,840 | 36,780 | 12,060 |
| Ash | 47,090 | 23,050 | 24,040 | 129,300 | 111,140 | 18,160 |
| Soft maple | 21,270 | 12,000 | 9,270 | 52,140 | 40,120 | 12,020 |
| Sweetgum | 11,650 | 4,790 | 6,860 | 39,040 | 31,620 | 7,420 |
| Blackgum | 30,580 | 13,270 | 17,310 | 104,290 | 82,700 | 21,590 |
| Cottonwood | 1,980 | -- | 1,980 | 12,520 | 12,520 | -- |
| Yellow-poplar | 108,720 | 37,280 | 71,440 | 433,460 | 315,690 | 117,770 |
| Basswood | 2,150 | 450 | 1,700 | 9,030 | 9,030 | -- |
| Other | 85,080 | 46,200 | 38,880 | 215,690 | 167,320 | 48,370 |
| Total hardwoods | 1,153,920 | 477,520 | 676,400 | 3,938,300 | 3,028,410 | 909,890 |
| All species | 1,232,570 | 510,460 | 722,110 | 4,179,440 | 3,188,990 | 990,450 |

ADAIR COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 350 | 210 | 140 | 840 | 430 | 410 |
| Other yellow pines | 1,620 | 670 | 950 | 5,720 | 2,640 | 3,080 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 940 | 610 | 330 | 1,210 | 460 | 750 |
| Total softwoods | 2,910 | 1,490 | 1,420 | 7,770 | 3,530 | 4,240 |
| Hardwoods: | | | | | | |
| Select white oak | 7,290 | 3,330 | 3,960 | 23,230 | 13,390 | 9,840 |
| Select red oak | 2,480 | 730 | 1,750 | 10,670 | 7,490 | 3,180 |
| Other white oak | 3,800 | 1,670 | 2,130 | 12,210 | 8,100 | 4,110 |
| Other red oak | 7,600 | 3,210 | 4,390 | 25,900 | 15,750 | 10,150 |
| Hickories | 8,460 | 4,600 | 3,860 | 22,480 | 14,100 | 8,380 |
| Hard maple | 2,120 | 1,040 | 1,080 | 6,150 | 5,320 | 830 |
| Beech | 2,500 | 560 | 1,940 | 11,750 | 8,750 | 3,000 |
| Black walnut | 910 | 530 | 380 | 1,990 | 1,220 | 770 |
| Ash | 1,820 | 980 | 840 | 4,610 | 3,810 | 800 |
| Soft maple | 1,000 | 570 | 430 | 2,500 | 1,310 | 1,190 |
| Sweetgum | 640 | 340 | 300 | 1,700 | 1,240 | 460 |
| Blackgum | 1,220 | 590 | 630 | 3,970 | 2,360 | 1,610 |
| Cottonwood | 130 | -- | 130 | 730 | 730 | -- |
| Yellow-poplar | 5,020 | 1,680 | 3,340 | 20,340 | 12,230 | 8,110 |
| Basswood | 100 | 30 | 70 | 370 | 370 | -- |
| Other | 4,030 | 2,450 | 1,580 | 9,040 | 6,190 | 2,850 |
| Total hardwoods | 49,120 | 22,310 | 26,810 | 157,640 | 102,360 | 55,280 |
| All species | 52,030 | 23,800 | 28,230 | 165,410 | 105,890 | 59,520 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

BRECKENRIDGE COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 310 | 120 | 190 | 1,130 | 770 | 360 |
| Other yellow pines | 2,180 | 540 | 1,640 | 9,900 | 5,440 | 4,460 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,580 | 1,090 | 490 | 1,860 | 580 | 1,280 |
| Total softwoods | 4,070 | 1,750 | 2,320 | 12,890 | 6,790 | 6,100 |
| Hardwoods: | | | | | | |
| Select white oak | 14,520 | 5,740 | 8,780 | 51,430 | 39,420 | 12,010 |
| Select red oak | 4,480 | 1,090 | 3,390 | 20,890 | 16,780 | 4,110 |
| Other white oak | 6,820 | 2,860 | 3,960 | 22,620 | 17,870 | 4,750 |
| Other red oak | 13,280 | 4,570 | 8,710 | 51,830 | 41,340 | 10,490 |
| Hickories | 14,210 | 6,780 | 7,430 | 42,840 | 34,200 | 8,640 |
| Hard maple | 4,030 | 2,010 | 2,020 | 11,730 | 10,690 | 1,040 |
| Beech | 5,290 | 940 | 4,350 | 26,260 | 23,160 | 3,100 |
| Black walnut | 1,470 | 700 | 770 | 3,940 | 3,240 | 700 |
| Ash | 3,670 | 1,730 | 1,940 | 10,340 | 8,900 | 1,440 |
| Soft maple | 1,510 | 830 | 680 | 3,900 | 3,490 | 410 |
| Sweetgum | 690 | 230 | 460 | 2,660 | 2,390 | 270 |
| Blackgum | 2,400 | 980 | 1,420 | 8,530 | 7,240 | 1,290 |
| Cottonwood | 160 | -- | 160 | 1,090 | 1,090 | -- |
| Yellow-poplar | 7,540 | 2,710 | 4,830 | 29,350 | 22,430 | 6,920 |
| Basswood | 160 | 30 | 130 | 710 | 710 | -- |
| Other | 6,360 | 3,320 | 3,040 | 17,090 | 13,910 | 3,180 |
| Total hardwoods | 86,590 | 34,520 | 52,070 | 305,210 | 246,860 | 58,350 |
| All species | 90,660 | 36,270 | 54,390 | 318,100 | 253,650 | 64,450 |

BULLITT COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 350 | 200 | 150 | 840 | 610 | 230 |
| Other yellow pines | 2,030 | 510 | 1,520 | 9,200 | 5,540 | 3,660 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 940 | 660 | 280 | 1,020 | 460 | 560 |
| Total softwoods | 3,320 | 1,370 | 1,950 | 11,060 | 6,610 | 4,450 |
| Hardwoods: | | | | | | |
| Select white oak | 10,290 | 4,210 | 6,080 | 35,820 | 26,440 | 9,380 |
| Select red oak | 3,260 | 860 | 2,400 | 14,730 | 11,860 | 2,870 |
| Other white oak | 5,250 | 2,230 | 3,020 | 17,250 | 13,340 | 3,910 |
| Other red oak | 9,740 | 3,550 | 6,190 | 36,860 | 28,050 | 8,810 |
| Hickories | 10,420 | 5,160 | 5,260 | 30,110 | 22,550 | 7,560 |
| Hard maple | 2,610 | 1,320 | 1,290 | 7,450 | 6,900 | 550 |
| Beech | 3,360 | 650 | 2,710 | 16,460 | 13,880 | 2,580 |
| Black walnut | 1,020 | 470 | 550 | 2,790 | 2,070 | 720 |
| Ash | 2,390 | 1,150 | 1,240 | 6,820 | 6,100 | 720 |
| Soft maple | 1,280 | 730 | 550 | 3,140 | 2,440 | 700 |
| Sweetgum | 670 | 270 | 400 | 2,300 | 1,800 | 500 |
| Blackgum | 1,610 | 640 | 970 | 5,730 | 4,640 | 1,090 |
| Cottonwood | 190 | -- | 190 | 1,160 | 1,160 | -- |
| Yellow-poplar | 5,610 | 2,040 | 3,570 | 21,820 | 15,420 | 6,400 |
| Basswood | 130 | 30 | 100 | 520 | 520 | -- |
| Other | 4,460 | 2,420 | 2,040 | 11,420 | 8,980 | 2,440 |
| Total hardwoods | 62,290 | 25,730 | 36,560 | 214,380 | 166,150 | 48,230 |
| All species | 65,610 | 27,100 | 38,510 | 225,440 | 172,760 | 52,680 |

* International ¼-inch rule.

Table 10.--*Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963--Continued*

CASEY COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 420 | 200 | 220 | 1,330 | 950 | 380 |
| Other yellow pines | 1,900 | 490 | 1,410 | 8,440 | 3,890 | 4,550 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,510 | 1,030 | 480 | 1,780 | 670 | 1,110 |
| Total softwoods | 3,830 | 1,720 | 2,110 | 11,550 | 5,510 | 6,040 |
| Hardwoods: | | | | | | |
| Select white oak | 15,740 | 6,350 | 9,390 | 55,240 | 42,030 | 13,210 |
| Select red oak | 4,870 | 1,220 | 3,650 | 22,450 | 18,200 | 4,250 |
| Other white oak | 7,810 | 3,300 | 4,510 | 25,700 | 20,250 | 5,450 |
| Other red oak | 14,320 | 5,170 | 9,150 | 54,460 | 42,280 | 12,180 |
| Hickories | 15,340 | 7,600 | 7,740 | 44,710 | 34,400 | 10,310 |
| Hard maple | 4,080 | 2,040 | 2,040 | 11,760 | 10,940 | 820 |
| Beech | 5,210 | 950 | 4,260 | 25,830 | 21,970 | 3,860 |
| Black walnut | 1,510 | 700 | 810 | 4,130 | 3,230 | 900 |
| Ash | 3,740 | 1,790 | 1,950 | 10,680 | 9,630 | 1,050 |
| Soft maple | 1,670 | 990 | 680 | 3,790 | 3,110 | 680 |
| Sweetgum | 880 | 360 | 520 | 2,950 | 2,350 | 600 |
| Blackgum | 2,690 | 1,070 | 1,620 | 9,600 | 8,130 | 1,470 |
| Cottonwood | 100 | -- | 100 | 600 | 600 | -- |
| Yellow-poplar | 8,180 | 3,080 | 5,100 | 31,070 | 22,810 | 8,260 |
| Basswood | 190 | 50 | 140 | 750 | 750 | -- |
| Other | 6,610 | 3,610 | 3,000 | 16,970 | 13,430 | 3,540 |
| Total hardwoods | 92,940 | 38,280 | 54,660 | 320,690 | 254,110 | 66,580 |
| All species | 96,770 | 40,000 | 56,770 | 332,240 | 259,620 | 72,620 |

CLINTON COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 140 | 60 | 80 | 490 | 330 | 160 |
| Other yellow pines | 1,140 | 330 | 810 | 4,930 | 3,260 | 1,670 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 660 | 450 | 210 | 750 | 310 | 440 |
| Total softwoods | 1,940 | 840 | 1,100 | 6,170 | 3,900 | 2,270 |
| Hardwoods: | | | | | | |
| Select white oak | 5,990 | 2,360 | 3,630 | 21,340 | 16,160 | 5,180 |
| Select red oak | 1,990 | 510 | 1,480 | 99,060 | 7,450 | 1,610 |
| Other white oak | 2,970 | 1,200 | 1,770 | 10,080 | 7,930 | 2,150 |
| Other red oak | 5,720 | 2,090 | 3,630 | 21,530 | 16,600 | 4,930 |
| Hickories | 6,290 | 3,130 | 3,160 | 18,360 | 13,880 | 4,480 |
| Hard maple | 1,530 | 770 | 760 | 4,460 | 4,150 | 310 |
| Beech | 1,990 | 420 | 1,570 | 9,420 | 7,840 | 1,580 |
| Black walnut | 590 | 280 | 310 | 1,590 | 1,240 | 350 |
| Ash | 1,600 | 800 | 800 | 4,250 | 3,710 | 540 |
| Soft maple | 720 | 360 | 360 | 1,950 | 1,260 | 690 |
| Sweetgum | 390 | 150 | 240 | 1,390 | 1,230 | 160 |
| Blackgum | 1,040 | 400 | 640 | 3,740 | 3,150 | 590 |
| Cottonwood | 40 | -- | 40 | 240 | 240 | -- |
| Yellow-poplar | 3,240 | 1,140 | 2,100 | 12,870 | 9,740 | 3,130 |
| Basswood | 70 | 20 | 50 | 270 | 270 | -- |
| Other | 2,790 | 1,440 | 1,350 | 7,400 | 5,850 | 1,550 |
| Total hardwoods | 36,960 | 15,070 | 21,890 | 127,950 | 100,700 | 27,250 |
| All species | 38,900 | 15,910 | 22,990 | 134,120 | 104,600 | 29,520 |

*International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

CUMBERLAND COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 490 | 260 | 230 | 1,340 | 560 | 780 |
| Other yellow pines | 1,490 | 560 | 930 | 5,540 | 2,290 | 3,250 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,200 | 830 | 370 | 1,330 | 480 | 850 |
| Total softwoods | 3,180 | 1,650 | 1,530 | 8,210 | 3,330 | 4,880 |
| Hardwoods: | | | | | | |
| Select white oak | 9,880 | 4,180 | 5,700 | 33,320 | 22,610 | 10,710 |
| Select red oak | 2,970 | 750 | 2,220 | 13,610 | 10,480 | 3,130 |
| Other white oak | 4,840 | 2,040 | 2,800 | 16,070 | 11,580 | 4,490 |
| Other red oak | 9,590 | 3,620 | 5,970 | 35,480 | 24,960 | 10,520 |
| Hickories | 10,520 | 5,330 | 5,190 | 30,060 | 22,020 | 8,040 |
| Hard maple | 2,650 | 1,290 | 1,360 | 7,790 | 7,000 | 790 |
| Beech | 3,670 | 720 | 2,950 | 17,790 | 14,790 | 3,000 |
| Black walnut | 1,130 | 590 | 540 | 2,720 | 1,920 | 800 |
| Ash | 2,350 | 1,200 | 1,150 | 6,260 | 5,480 | 780 |
| Soft maple | 1,130 | 680 | 450 | 2,590 | 1,870 | 720 |
| Sweetgum | 720 | 340 | 380 | 2,150 | 1,590 | 560 |
| Blackgum | 1,590 | 730 | 860 | 5,280 | 3,700 | 1,580 |
| Cottonwood | 60 | -- | 60 | 360 | 360 | -- |
| Yellow-poplar | 5,700 | 2,100 | 3,600 | 21,840 | 14,350 | 7,490 |
| Basswood | 120 | 30 | 90 | 520 | 520 | -- |
| Other | 4,310 | 2,450 | 1,860 | 10,460 | 8,050 | 2,410 |
| Total hardwoods | 61,230 | 26,050 | 35,180 | 206,300 | 151,280 | 55,020 |
| All species | 64,410 | 27,700 | 36,710 | 214,510 | 154,610 | 59,900 |

GRAYSON COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 300 | 130 | 170 | 1,040 | 560 | 480 |
| Other yellow pines | 2,010 | 810 | 1,200 | 7,340 | 4,760 | 2,580 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,300 | 890 | 410 | 1,510 | 360 | 1,150 |
| Total softwoods | 3,610 | 1,830 | 1,780 | 9,890 | 5,680 | 4,210 |
| Hardwoods: | | | | | | |
| Select white oak | 9,670 | 3,910 | 5,760 | 33,670 | 24,280 | 9,390 |
| Select red oak | 2,880 | 730 | 2,150 | 13,220 | 10,430 | 2,790 |
| Other white oak | 4,430 | 1,820 | 2,610 | 14,860 | 11,440 | 3,420 |
| Other red oak | 8,960 | 3,300 | 5,660 | 33,540 | 24,840 | 8,700 |
| Hickories | 9,450 | 4,790 | 4,660 | 27,070 | 19,940 | 7,130 |
| Hard maple | 2,650 | 1,310 | 1,340 | 7,840 | 6,930 | 910 |
| Beech | 3,190 | 630 | 2,560 | 15,420 | 12,830 | 2,590 |
| Black walnut | 990 | 510 | 480 | 2,440 | 1,840 | 600 |
| Ash | 2,570 | 1,300 | 1,270 | 6,790 | 5,780 | 1,010 |
| Soft maple | 920 | 540 | 380 | 2,240 | 1,750 | 490 |
| Sweetgum | 480 | 170 | 310 | 1,820 | 1,610 | 210 |
| Blackgum | 1,580 | 690 | 890 | 5,470 | 4,200 | 1,270 |
| Cottonwood | 20 | -- | 20 | 120 | 120 | -- |
| Yellow-poplar | 5,450 | 1,770 | 3,680 | 22,340 | 16,700 | 5,640 |
| Basswood | 100 | 20 | 80 | 430 | 430 | -- |
| Other | 4,580 | 2,450 | 2,130 | 11,910 | 9,280 | 2,630 |
| Total hardwoods | 57,920 | 23,940 | 33,980 | 199,180 | 152,400 | 46,780 |
| All species | 61,530 | 25,770 | 35,760 | 209,070 | 158,080 | 50,990 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

GREEN COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 160 | 70 | 90 | 530 | 300 | 230 |
| Other yellow pines | 650 | 160 | 490 | 2,880 | 1,670 | 1,210 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 660 | 440 | 220 | 830 | 230 | 600 |
| Total softwoods | 1,470 | 670 | 800 | 4,240 | 2,200 | 2,040 |
| Hardwoods: | | | | | | |
| Select white oak | 5,290 | 2,030 | 3,260 | 19,070 | 14,360 | 4,710 |
| Select red oak | 1,530 | 380 | 1,150 | 7,060 | 5,700 | 1,360 |
| Other white oak | 2,350 | 930 | 1,420 | 8,170 | 6,380 | 1,790 |
| Other red oak | 4,830 | 1,680 | 3,150 | 18,720 | 14,520 | 4,200 |
| Hickories | 5,350 | 2,620 | 2,730 | 15,870 | 12,190 | 3,680 |
| Hard maple | 1,480 | 730 | 750 | 4,400 | 3,970 | 430 |
| Beech | 1,780 | 340 | 1,440 | 8,560 | 7,000 | 1,560 |
| Black walnut | 520 | 270 | 250 | 1,290 | 1,000 | 290 |
| Ash | 1,350 | 660 | 690 | 3,660 | 3,170 | 490 |
| Soft maple | 540 | 300 | 240 | 1,330 | 1,080 | 250 |
| Sweetgum | 290 | 110 | 180 | 1,090 | 850 | 240 |
| Blackgum | 870 | 380 | 490 | 3,020 | 2,350 | 670 |
| Cottonwood | 20 | -- | 20 | 120 | 120 | -- |
| Yellow-poplar | 2,720 | 1,000 | 1,720 | 10,440 | 7,560 | 2,880 |
| Basswood | 60 | 10 | 50 | 270 | 270 | -- |
| Other | 2,430 | 1,230 | 1,200 | 6,600 | 5,140 | 1,460 |
| Total hardwoods | 31,410 | 12,670 | 18,740 | 109,670 | 85,660 | 24,010 |
| All species | 32,880 | 13,340 | 19,540 | 113,910 | 87,860 | 26,050 |

HANCOCK COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 150 | 80 | 70 | 400 | 250 | 150 |
| Other yellow pines | 560 | 190 | 370 | 2,220 | 1,190 | 1,030 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 490 | 350 | 140 | 500 | 210 | 290 |
| Total softwoods | 1,200 | 620 | 580 | 3,120 | 1,650 | 1,470 |
| Hardwoods: | | | | | | |
| Select white oak | 4,340 | 1,810 | 2,530 | 14,870 | 9,970 | 4,900 |
| Select red oak | 1,320 | 360 | 960 | 5,870 | 4,480 | 1,390 |
| Other white oak | 2,030 | 820 | 1,210 | 6,980 | 5,100 | 1,880 |
| Other red oak | 4,130 | 1,600 | 2,530 | 14,890 | 10,290 | 4,600 |
| Hickories | 4,600 | 2,360 | 2,240 | 13,080 | 9,430 | 3,650 |
| Hard maple | 1,270 | 650 | 620 | 3,560 | 3,090 | 470 |
| Beech | 1,510 | 310 | 1,200 | 7,190 | 5,680 | 1,510 |
| Black walnut | 560 | 270 | 290 | 1,520 | 1,220 | 300 |
| Ash | 1,160 | 530 | 630 | 3,510 | 3,140 | 370 |
| Soft maple | 720 | 270 | 450 | 2,650 | 2,150 | 500 |
| Sweetgum | 410 | 160. | 250 | 1,450 | 1,240 | 210 |
| Blackgum | 680 | 320 | 360 | 2,190 | 1,600 | 590 |
| Cottonwood | 320 | -- | 320 | 2,190 | 2,190 | -- |
| Yellow-poplar | 2,590 | 920 | 1,670 | 10,070 | 6,940 | 3,130 |
| Basswood | 50 | -- | 50 | 280 | 280 | -- |
| Other | 2,630 | 1,400 | 1,230 | 6,700 | 5,520 | 1,180 |
| Total hardwoods | 28,320 | 11,780 | 16,540 | 97,000 | 72,320 | 24,680 |
| All species | 29,520 | 12,400 | 17,120 | 100,120 | 73,970 | 26,150 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

HARDIN COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 470 | 240 | 230 | 1,350 | 780 | 570 |
| Other yellow pines | 2,190 | 710 | 1,480 | 9,000 | 5,470 | 3,530 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,500 | 1,060 | 440 | 1,590 | 600 | 990 |
| Total softwoods | 4,160 | 2,010 | 2,150 | 11,940 | 6,850 | 5,090 |
| Hardwoods: | | | | | | |
| Select white oak | 12,810 | 5,220 | 7,590 | 44,470 | 32,380 | 12,090 |
| Select red oak | 4,030 | 1,020 | 3,010 | 18,460 | 14,550 | 3,910 |
| Other white oak | 6,220 | 2,610 | 3,610 | 20,510 | 15,690 | 4,820 |
| Other red oak | 12,140 | 4,560 | 7,580 | 44,950 | 33,940 | 11,010 |
| Hickories | 12,950 | 6,460 | 6,490 | 37,670 | 28,100 | 9,570 |
| Hard maple | 3,840 | 1,980 | 1,860 | 10,770 | 9,740 | 1,030 |
| Beech | 4,510 | 900 | 3,610 | 21,610 | 18,120 | 3,490 |
| Black walnut | 1,310 | 660 | 650 | 3,310 | 2,440 | 870 |
| Ash | 3,240 | 1,600 | 1,640 | 8,970 | 7,880 | 1,090 |
| Soft maple | 1,490 | 830 | 660 | 3,750 | 2,800 | 950 |
| Sweetgum | 810 | 350 | 460 | 2,590 | 1,990 | 600 |
| Blackgum | 2,170 | 950 | 1,220 | 7,320 | 5,820 | 1,500 |
| Cottonwood | 140 | -- | 140 | 920 | 920 | -- |
| Yellow-poplar | 7,620 | 2,490 | 5,130 | 31,270 | 22,620 | 8,650 |
| Basswood | 160 | 20 | 140 | 680 | 680 | -- |
| Other | 5,990 | 3,330 | 2,660 | 14,930 | 11,470 | 3,460 |
| Total hardwoods | 79,430 | 32,980 | 46,450 | 272,180 | 209,140 | 63,040 |
| All species | 83,590 | 34,990 | 48,600 | 284,120 | 215,990 | 68,130 |

HART COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 240 | 120 | 120 | 740 | 580 | 160 |
| Other yellow pines | 1,590 | 390 | 1,200 | 7,250 | 4,060 | 3,190 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,100 | 740 | 360 | 1,390 | 480 | 910 |
| Total softwoods | 2,930 | 1,250 | 1,680 | 9,380 | 5,120 | 4,260 |
| Hardwoods: | | | | | | |
| Select white oak | 10,080 | 4,030 | 6,050 | 35,480 | 26,370 | 9,110 |
| Select red oak | 3,160 | 800 | 2,360 | 14,580 | 11,540 | 3,040 |
| Other white oak | 4,980 | 2,100 | 2,880 | 16,350 | 12,620 | 3,730 |
| Other red oak | 9,310 | 3,370 | 5,940 | 35,190 | 26,900 | 8,290 |
| Hickories | 10,500 | 5,280 | 5,220 | 30,120 | 21,640 | 8,480 |
| Hard maple | 2,740 | 1,400 | 1,340 | 7,740 | 7,050 | 690 |
| Beech | 3,530 | 620 | 2,910 | 17,780 | 14,980 | 2,800 |
| Black walnut | 1,040 | 500 | 540 | 2,750 | 2,170 | 580 |
| Ash | 2,500 | 1,160 | 1,340 | 7,300 | 6,470 | 830 |
| Soft maple | 1,160 | 610 | 550 | 3,170 | 2,760 | 410 |
| Sweetgum | 500 | 130 | 370 | 2,130 | 1,820 | 310 |
| Blackgum | 1,700 | 720 | 980 | 5,990 | 4,800 | 1,190 |
| Cottonwood | 220 | -- | 220 | 1,490 | 1,490 | -- |
| Yellow-poplar | 5,400 | 1,920 | 3,480 | 21,260 | 15,240 | 6,020 |
| Basswood | 110 | 30 | 80 | 460 | 460 | -- |
| Other | 4,690 | 2,480 | 2,210 | 12,390 | 9,940 | 2,450 |
| Total hardwoods | 61,620 | 25,150 | 36,470 | 214,180 | 166,250 | 47,930 |
| All species | 64,550 | 26,400 | 38,150 | 223,560 | 171,370 | 52,190 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

LARUE COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 120 | 50 | 70 | 420 | 300 | 120 |
| Other yellow pines | 860 | 160 | 700 | 4,270 | 2,770 | 1,500 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 530 | 370 | 160 | 560 | 190 | 370 |
| Total softwoods | 1,510 | 580 | 930 | 5,250 | 3,260 | 1,990 |
| Hardwoods: | | | | | | |
| Select white oak | 5,490 | 2,160 | 3,330 | 19,570 | 14,830 | 4,740 |
| Select red oak | 1,680 | 400 | 1,280 | 7,930 | 6,400 | 1,530 |
| Other white oak | 2,670 | 1,070 | 1,600 | 9,170 | 7,310 | 1,860 |
| Other red oak | 5,010 | 1,730 | 3,280 | 19,550 | 15,300 | 4,250 |
| Hickories | 5,360 | 2,590 | 2,770 | 16,000 | 12,610 | 3,390 |
| Hard maple | 1,440 | 740 | 700 | 4,100 | 3,750 | 350 |
| Beech | 1,780 | 340 | 1,440 | 8,620 | 7,390 | 1,230 |
| Black walnut | 520 | 250 | 270 | 1,370 | 1,090 | 280 |
| Ash | 1,410 | 650 | 760 | 3,980 | 3,370 | 610 |
| Soft maple | 550 | 320 | 230 | 1,230 | 1,090 | 140 |
| Sweetgum | 280 | 90 | 190 | 1,050 | 890 | 160 |
| Blackgum | 900 | 380 | 520 | 3,070 | 2,550 | 520 |
| Cottonwood | 20 | -- | 20 | 120 | 120 | -- |
| Yellow-poplar | 2,680 | 980 | 1,700 | 10,360 | 7,940 | 2,420 |
| Basswood | 70 | 20 | 50 | 270 | 270 | -- |
| Other | 2,300 | 1,160 | 1,140 | 6,310 | 5,120 | 1,190 |
| Total hardwoods | 32,160 | 12,880 | 19,280 | 112,700 | 90,030 | 22,670 |
| All species | 33,670 | 13,460 | 20,210 | 117,950 | 93,290 | 24,660 |

MARION COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 260 | 140 | 120 | 740 | 480 | 260 |
| Other yellow pines | 1,090 | 400 | 690 | 4,130 | 1,730 | 2,400 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 960 | 690 | 270 | 990 | 300 | 690 |
| Total softwoods | 2,310 | 1,230 | 1,080 | 5,860 | 2,510 | 3,350 |
| Hardwoods: | | | | | | |
| Select white oak | 6,520 | 2,830 | 3,690 | 21,570 | 14,620 | 6,950 |
| Select red oak | 2,010 | 540 | 1,470 | 8,990 | 6,770 | 2,220 |
| Other white oak | 3,440 | 1,520 | 1,920 | 11,010 | 8,040 | 2,970 |
| Other red oak | 6,210 | 2,440 | 3,770 | 22,340 | 16,110 | 6,230 |
| Hickories | 7,320 | 3,840 | 3,480 | 20,040 | 13,630 | 6,410 |
| Hard maple | 1,940 | 1,040 | 900 | 5,230 | 4,590 | 640 |
| Beech | 2,110 | 440 | 1,670 | 10,120 | 8,270 | 1,850 |
| Black walnut | 790 | 410 | 380 | 1,910 | 1,370 | 540 |
| Ash | 1,640 | 790 | 850 | 4,720 | 3,970 | 750 |
| Soft maple | 740 | 440 | 300 | 1,660 | 1,210 | 450 |
| Sweetgum | 650 | 340 | 310 | 1,750 | 1,310 | 440 |
| Blackgum | 900 | 420 | 480 | 2,960 | 2,090 | 870 |
| Cottonwood | 60 | -- | 60 | 360 | 360 | -- |
| Yellow-poplar | 4,030 | 1,450 | 2,580 | 15,580 | 10,260 | 5,320 |
| Basswood | 70 | 10 | 60 | 300 | 300 | -- |
| Other | 3,230 | 1,870 | 1,360 | 7,480 | 5,390 | 2,090 |
| Total hardwoods | 41,660 | 18,380 | 23,280 | 136,020 | 98,290 | 37,730 |
| All species | 43,970 | 19,610 | 24,360 | 141,880 | 100,800 | 41,080 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

MEADE COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 290 | 150 | 140 | 850 | 450 | 400 |
| Other yellow pines | 2,270 | 490 | 1,780 | 10,690 | 8,810 | 1,880 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 930 | 690 | 240 | 870 | 250 | 620 |
| Total softwoods | 3,490 | 1,330 | 2,160 | 12,410 | 9,510 | 2,900 |
| Hardwoods: | | | | | | |
| Select white oak | 6,920 | 2,940 | 3,980 | 23,260 | 16,400 | 6,860 |
| Select red oak | 2,110 | 550 | 1,560 | 9,550 | 7,220 | 2,330 |
| Other white oak | 3,550 | 1,550 | 2,000 | 11,320 | 8,340 | 2,980 |
| Other red oak | 6,490 | 2,570 | 3,920 | 23,300 | 17,130 | 6,170 |
| Hickories | 7,140 | 3,670 | 3,470 | 20,020 | 14,340 | 5,680 |
| Hard maple | 1,860 | 970 | 890 | 5,170 | 4,670 | 500 |
| Beech | 2,220 | 470 | 1,750 | 10,540 | 8,530 | 2,010 |
| Black walnut | 660 | 320 | 340 | 1,740 | 1,250 | 490 |
| Ash | 1,630 | 820 | 810 | 4,450 | 3,700 | 750 |
| Soft maple | 780 | 410 | 370 | 2,140 | 1,520 | 620 |
| Sweetgum | 480 | 220 | 260 | 1,430 | 990 | 440 |
| Blackgum | 1,150 | 520 | 630 | 3,740 | 2,960 | 780 |
| Cottonwood | 110 | -- | 110 | 660 | 660 | -- |
| Yellow-poplar | 4,150 | 1,320 | 2,830 | 17,300 | 12,410 | 4,890 |
| Basswood | 80 | 20 | 60 | 310 | 310 | -- |
| Other | 3,190 | 1,780 | 1,410 | 7,890 | 5,880 | 2,010 |
| Total hardwoods | 42,520 | 18,130 | 24,390 | 142,820 | 106,310 | 36,510 |
| All species | 46,010 | 19,460 | 26,550 | 155,230 | 115,820 | 39,410 |

METCALFE COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 280 | 150 | 130 | 760 | 470 | 290 |
| Other yellow pines | 1,450 | 520 | 930 | 5,620 | 3,620 | 2,000 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 920 | 630 | 290 | 1,050 | 370 | 680 |
| Total softwoods | 2,650 | 1,300 | 1,350 | 7,430 | 4,460 | 2,970 |
| Hardwoods: | | | | | | |
| Select white oak | 8,420 | 3,420 | 5,000 | 29,380 | 21,990 | 7,390 |
| Select red oak | 2,590 | 630 | 1,960 | 12,010 | 9,800 | 2,210 |
| Other white oak | 4,140 | 1,700 | 2,440 | 13,870 | 10,590 | 3,280 |
| Other red oak | 7,790 | 2,840 | 4,950 | 29,410 | 22,640 | 6,770 |
| Hickories | 8,130 | 4,080 | 4,050 | 23,390 | 17,720 | 5,670 |
| Hard maple | 2,180 | 1,180 | 1,000 | 5,780 | 5,250 | 530 |
| Beech | 2,690 | 570 | 2,120 | 12,760 | 10,060 | 2,700 |
| Black walnut | 780 | 360 | 420 | 2,140 | 1,630 | 510 |
| Ash | 2,090 | 1,050 | 1,040 | 5,610 | 5,000 | 610 |
| Soft maple | 850 | 490 | 360 | 1,980 | 1,460 | 520 |
| Sweetgum | 480 | 170 | 310 | 1,790 | 1,470 | 320 |
| Blackgum | 1,380 | 580 | 800 | 4,800 | 3,970 | 830 |
| Cottonwood | 20 | -- | 20 | 120 | 120 | -- |
| Yellow-poplar | 4,410 | 1,580 | 2,830 | 17,300 | 12,430 | 4,870 |
| Basswood | 90 | 10 | 80 | 390 | 390 | -- |
| Other | 3,530 | 1,890 | 1,640 | 9,160 | 6,960 | 2,200 |
| Total hardwoods | 49,570 | 20,550 | 29,020 | 169,890 | 131,480 | 38,410 |
| All species | 52,220 | 21,850 | 30,370 | 177,320 | 135,940 | 41,380 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

NELSON COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 380 | 210 | 170 | 950 | 490 | 460 |
| Other yellow pines | 2,730 | 720 | 2,010 | 12,280 | 10,300 | 1,980 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,310 | 920 | 390 | 1,440 | 450 | 990 |
| Total softwoods | 4,420 | 1,850 | 2,570 | 14,670 | 11,240 | 3,430 |
| Hardwoods: | | | | | | |
| Select white oak | 9,820 | 3,800 | 6,020 | 35,070 | 25,200 | 9,870 |
| Select red oak | 2,980 | 730 | 2,250 | 13,810 | 10,460 | 3,350 |
| Other white oak | 4,590 | 1,900 | 2,690 | 15,250 | 11,280 | 3,970 |
| Other red oak | 8,810 | 3,130 | 5,680 | 33,780 | 25,560 | 8,220 |
| Hickories | 9,780 | 4,730 | 5,050 | 29,130 | 22,430 | 6,700 |
| Hard maple | 2,820 | 1,450 | 1,370 | 8,040 | 7,260 | 780 |
| Beech | 3,510 | 670 | 2,840 | 17,040 | 14,060 | 2,980 |
| Black walnut | 990 | 470 | 520 | 2,650 | 2,050 | 600 |
| Ash | 2,700 | 1,310 | 1,390 | 7,170 | 5,660 | 1,510 |
| Soft maple | 1,160 | 660 | 500 | 2,770 | 1,980 | 790 |
| Sweetgum | 570 | 220 | 350 | 1,980 | 1,720 | 260 |
| Blackgum | 1,590 | 740 | 850 | 5,020 | 4,050 | 970 |
| Cottonwood | 40 | -- | 40 | 240 | 240 | -- |
| Yellow-poplar | 6,180 | 2,010 | 4,170 | 25,750 | 19,330 | 6,420 |
| Basswood | 120 | 20 | 100 | 520 | 520 | -- |
| Other | 4,500 | 2,410 | 2,090 | 11,430 | 8,730 | 2,700 |
| Total hardwoods | 60,160 | 24,250 | 35,910 | 209,650 | 160,530 | 49,120 |
| All species | 64,580 | 26,100 | 38,480 | 224,320 | 171,770 | 52,550 |

PULASKI COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 7,980 | 1,650 | 6,330 | 23,790 | 21,580 | 2,210 |
| Other yellow pines | 9,030 | 2,900 | 6,130 | 33,190 | 27,520 | 5,670 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,990 | 1,380 | 610 | 2,290 | 870 | 1,420 |
| Total softwoods | 19,000 | 5,930 | 13,070 | 59,270 | 49,970 | 9,300 |
| Hardwoods: | | | | | | |
| Select white oak | 19,650 | 7,680 | 11,970 | 64,590 | 50,750 | 13,840 |
| Select red oak | 5,650 | 1,410 | 4,240 | 25,570 | 20,490 | 5,080 |
| Other white oak | 10,030 | 4,130 | 5,900 | 29,360 | 24,030 | 5,330 |
| Other red oak | 20,000 | 7,110 | 12,890 | 72,100 | 60,420 | 11,680 |
| Hickories | 18,750 | 8,730 | 10,020 | 52,880 | 42,620 | 10,260 |
| Hard maple | 4,970 | 2,510 | 2,460 | 13,810 | 12,900 | 910 |
| Beech | 6,140 | 1,020 | 5,120 | 30,960 | 27,350 | 3,610 |
| Black walnut | 1,630 | 770 | 860 | 4,240 | 3,230 | 1,010 |
| Ash | 4,450 | 2,110 | 2,340 | 12,310 | 10,480 | 1,830 |
| Soft maple | 2,060 | 1,200 | 860 | 4,460 | 3,760 | 700 |
| Sweetgum | 960 | 340 | 620 | 3,340 | 2,870 | 470 |
| Blackgum | 2,840 | 1,190 | 1,650 | 9,840 | 8,230 | 1,610 |
| Cottonwood | 140 | -- | 140 | 920 | 920 | -- |
| Yellow-poplar | 12,400 | 3,800 | 8,600 | 50,700 | 41,590 | 9,110 |
| Basswood | 190 | 40 | 150 | 780 | 780 | -- |
| Other | 7,250 | 3,770 | 3,480 | 18,440 | 15,180 | 3,260 |
| Total hardwoods | 117,110 | 45,810 | 71,300 | 394,300 | 325,600 | 68,700 |
| All species | 136,110 | 51,740 | 84,370 | 453,570 | 375,570 | 78,000 |

* International ¼-inch rule.

Table 10. -- *Volume of growing stock and sawtimber on commercial-forest land by species and kind of material*
*Pennyroyal Unit, Kentucky, 1963 -- Continued*

RUSSELL COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 240 | 140 | 100 | 570 | 350 | 220 |
| Other yellow pines | 900 | 320 | 580 | 3,410 | 1,580 | 1,830 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 760 | 540 | 220 | 790 | 270 | 520 |
| Total softwoods | 1,900 | 1,000 | 900 | 4,770 | 2,200 | 2,570 |
| Hardwoods: | | | | | | |
| Select white oak | 6,120 | 2,720 | 3,400 | 19,920 | 12,960 | 6,960 |
| Select red oak | 1,920 | 540 | 1,380 | 8,400 | 6,000 | 2,400 |
| Other white oak | 3,080 | 1,320 | 1,760 | 10,100 | 7,060 | 3,040 |
| Other red oak | 5,850 | 2,420 | 3,430 | 20,330 | 13,600 | 6,730 |
| Hickories | 6,520 | 3,550 | 2,970 | 17,240 | 11,330 | 5,910 |
| Hard maple | 1,540 | 810 | 730 | 4,170 | 3,570 | 600 |
| Beech | 1,710 | 430 | 1,280 | 7,710 | 5,490 | 2,220 |
| Black walnut | 620 | 340 | 280 | 1,400 | 920 | 480 |
| Ash | 1,360 | 720 | 640 | 3,530 | 3,050 | 480 |
| Soft maple | 630 | 390 | 240 | 1,380 | 1,060 | 320 |
| Sweetgum | 460 | 230 | 230 | 1,300 | 830 | 470 |
| Blackgum | 970 | 450 | 520 | 3,180 | 2,350 | 830 |
| Cottonwood | 90 | -- | 90 | 480 | 480 | -- |
| Yellow-poplar | 3,320 | 1,240 | 2,080 | 12,610 | 7,720 | 4,890 |
| Basswood | 70 | 20 | 50 | 260 | 260 | -- |
| Other | 2,870 | 1,720 | 1,150 | 6,530 | 4,450 | 2,080 |
| Total hardwoods | 37,130 | 16,900 | 20,230 | 118,540 | 81,130 | 37,410 |
| All species | 39,030 | 17,900 | 21,130 | 123,310 | 83,330 | 39,980 |

TAYLOR COUNTY

| | | | | | | |
|---|---|---|---|---|---|---|
| Softwoods: | | | | | | |
| Shortleaf pine | 190 | 80 | 110 | 610 | 380 | 230 |
| Other yellow pines | 970 | 250 | 720 | 4,410 | 2,530 | 1,880 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 740 | 490 | 250 | 910 | 380 | 530 |
| Total softwoods | 1,900 | 820 | 1,080 | 5,930 | 3,290 | 2,640 |
| Hardwoods: | | | | | | |
| Select white oak | 6,700 | 2,560 | 4,140 | 24,250 | 18,510 | 5,740 |
| Select red oak | 2,060 | 530 | 1,530 | 9,430 | 7,760 | 1,670 |
| Other white oak | 3,230 | 1,280 | 1,950 | 11,150 | 8,840 | 2,310 |
| Other red oak | 6,160 | 2,160 | 4,000 | 23,830 | 18,600 | 5,230 |
| Hickories | 6,730 | 3,270 | 3,460 | 19,890 | 15,490 | 4,400 |
| Hard maple | 1,770 | 870 | 900 | 5,240 | 4,740 | 500 |
| Beech | 2,230 | 430 | 1,800 | 10,960 | 9,150 | 1,810 |
| Black walnut | 650 | 310 | 340 | 1,740 | 1,370 | 370 |
| Ash | 1,620 | 750 | 870 | 4,690 | 4,170 | 520 |
| Soft maple | 730 | 400 | 330 | 1,810 | 1,490 | 320 |
| Sweetgum | 410 | 160 | 250 | 1,440 | 1,190 | 250 |
| Blackgum | 1,160 | 500 | 660 | 3,970 | 3,360 | 610 |
| Cottonwood | 40 | -- | 40 | 240 | 240 | -- |
| Yellow-poplar | 3,530 | 1,290 | 2,240 | 13,630 | 9,770 | 3,860 |
| Basswood | 80 | 20 | 60 | 340 | 340 | -- |
| Other | 2,960 | 1,550 | 1,410 | 7,690 | 6,060 | 1,630 |
| Total hardwoods | 40,060 | 16,080 | 23,980 | 140,300 | 111,080 | 29,220 |
| All species | 41,960 | 16,900 | 25,060 | 146,230 | 114,370 | 31,860 |

* International ¼-inch rule.

Table 10.--*Volume of growing stock and sawtimber on commercial-forest land by species and kind of material Pennyroyal Unit, Kentucky, 1963 -- Continued*

WAYNE COUNTY

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 1,040 | 620 | 420 | 2,170 | 1,020 | 1,150 |
| Other yellow pines | 5,850 | 1,710 | 4,140 | 24,990 | 21,250 | 3,740 |
| Hemlock | 20 | -- | 20 | 60 | 60 | -- |
| Redcedar | 1,940 | 1,370 | 570 | 2,110 | 640 | 1,470 |
| Total softwoods | 8,850 | 3,700 | 5,150 | 29,330 | 22,970 | 6,360 |
| Hardwoods: | | | | | | |
| Select white oak | 13,370 | 5,470 | 7,900 | 46,040 | 32,290 | 13,850 |
| Select red oak | 4,270 | 1,100 | 3,170 | 19,570 | 14,920 | 4,650 |
| Other white oak | 6,640 | 2,900 | 3,740 | 21,020 | 15,280 | 5,740 |
| Other red oak | 12,870 | 4,820 | 8,050 | 47,510 | 34,300 | 13,210 |
| Hickories | 14,250 | 7,300 | 6,950 | 40,110 | 29,490 | 10,620 |
| Hard maple | 4,010 | 2,150 | 1,860 | 10,850 | 9,950 | 900 |
| Beech | 4,990 | 970 | 4,020 | 24,100 | 19,780 | 4,320 |
| Black walnut | 1,360 | 740 | 620 | 3,180 | 2,280 | 900 |
| Ash | 3,800 | 1,950 | 1,850 | 9,650 | 7,670 | 1,980 |
| Soft maple | 1,630 | 980 | 650 | 3,700 | 2,530 | 1,170 |
| Sweetgum | 880 | 410 | 470 | 2,730 | 2,240 | 490 |
| Blackgum | 2,140 | 1,020 | 1,120 | 6,870 | 5,150 | 1,720 |
| Cottonwood | 60 | -- | 60 | 360 | 360 | -- |
| Yellow-poplar | 8,950 | 2,760 | 6,190 | 37,560 | 28,200 | 9,360 |
| Basswood | 130 | 20 | 110 | 600 | 600 | -- |
| Other | 6,370 | 3,470 | 2,900 | 15,850 | 11,790 | 4,060 |
| Total hardwoods | 85,720 | 36,060 | 49,660 | 289,700 | 216,730 | 72,970 |
| All species | 94,570 | 39,760 | 54,810 | 319,030 | 239,700 | 79,330 |

* International ¼-inch rule.

Table 11.--*Volume of growing-stock trees on commercial-forest land by species and diameter class*
*Pennyroyal Unit, Kentucky, 1963*

(In thousand cubic feet by diameter in inches)

| Species | Total | 5.0-6.9 | 7.0-8.9 | 9.0-10.9 | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0 and larger |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Softwoods: | | | | | | | | | | | |
| Shortleaf pine | 14,160 | 1,990 | 2,540 | 2,980 | 2,500 | 2,250 | 1,080 | 650 | 170 | -- | -- |
| Other yellow pines | 42,510 | 5,410 | 7,780 | 9,920 | 7,670 | 6,750 | 2,920 | 2,060 | -- | -- | -- |
| Hemlock | 20 | -- | -- | -- | -- | -- | -- | -- | 10 | -- | 10 |
| Redcedar | 21,960 | 7,290 | 7,930 | 4,530 | 1,430 | 250 | 340 | -- | 190 | -- | -- |
| Total softwoods | 78,650 | 14,690 | 18,250 | 17,430 | 11,600 | 9,250 | 4,340 | 2,710 | 370 | -- | 10 |
| Hardwoods: | | | | | | | | | | | |
| Select white oak | 188,910 | 16,570 | 25,900 | 34,510 | 37,830 | 30,500 | 18,920 | 11,220 | 6,220 | 2,840 | 4,400 |
| Select red oak | 58,240 | 4,460 | 5,010 | 5,360 | 8,560 | 8,450 | 7,470 | 7,330 | 1,810 | 5,050 | 4,740 |
| Other white oak | 92,870 | 7,350 | 15,570 | 16,310 | 15,880 | 17,520 | 9,840 | 5,590 | 1,140 | 2,290 | 1,380 |
| Other red oak | 178,810 | 10,770 | 21,860 | 32,460 | 29,000 | 26,150 | 22,810 | 10,920 | 6,990 | 6,110 | 11,740 |
| Hickories | 192,070 | 19,420 | 36,400 | 40,420 | 36,430 | 23,070 | 19,800 | 7,130 | 4,100 | 2,930 | 2,370 |
| Hard maple | 51,530 | 6,670 | 10,420 | 9,250 | 7,740 | 7,210 | 4,120 | 2,310 | 1,890 | 1,270 | 650 |
| Beech | 63,920 | 1,290 | 4,290 | 6,780 | 8,790 | 9,630 | 10,530 | 7,610 | 3,640 | 4,760 | 6,600 |
| Black walnut | 19,050 | 2,900 | 3,840 | 2,760 | 3,150 | 4,110 | 1,100 | 600 | 430 | 160 | -- |
| Ash | 47,090 | 6,850 | 8,280 | 7,900 | 7,350 | 4,490 | 4,050 | 1,960 | 3,610 | 250 | 2,350 |
| Soft maple | 21,270 | 3,690 | 3,680 | 4,700 | 3,020 | 1,930 | 1,200 | 1,740 | 1,310 | -- | -- |
| Sweetgum | 11,650 | 620 | 1,570 | 2,590 | 2,380 | 1,310 | 1,050 | 1,320 | 810 | -- | -- |
| Blackgum | 30,580 | 3,370 | 4,390 | 5,430 | 5,240 | 3,880 | 2,200 | 890 | 1,830 | 1,950 | 1,400 |
| Cottonwood | 1,980 | -- | -- | -- | -- | 780 | -- | 310 | -- | -- | 890 |
| Yellow-poplar | 108,720 | 7,200 | 12,170 | 17,740 | 20,380 | 14,520 | 13,970 | 11,700 | 5,070 | 2,320 | 3,650 |
| Basswood | 2,150 | -- | 330 | 120 | 140 | 510 | 390 | -- | 660 | -- | -- |
| Other | 85,080 | 15,420 | 17,650 | 13,250 | 12,970 | 8,800 | 5,400 | 3,830 | 3,020 | 2,930 | 1,810 |
| Total hardwoods | 1,153,920 | 106,580 | 171,360 | 199,580 | 198,860 | 162,860 | 122,850 | 74,460 | 42,530 | 32,860 | 41,980 |
| All species | 1,232,570 | 121,270 | 189,610 | 217,010 | 210,460 | 172,110 | 127,190 | 77,170 | 42,900 | 32,860 | 41,990 |

Table 12.--*Volume of sawtimber on commercial-forest land by species and diameter class*

*Pennyroyal Unit, Kentucky, 1963*

(In thousand board feet* by diameter in inches)

| Species | Total | 9.0-10.9† | 11.0-12.9 | 13.0-14.9 | 15.0-16.9 | 17.0-18.9 | 19.0-20.9 | 21.0-22.9 | 23.0 and larger |
|---|---|---|---|---|---|---|---|---|---|
| Softwoods: | | | | | | | | | |
| Shortleaf pine | 40,890 | 13,030 | 10,870 | 9,060 | 3,840 | 3,540 | 550 | -- | -- |
| Other yellow pines | 175,410 | 55,840 | 45,610 | 41,430 | 19,050 | 13,480 | -- | -- | -- |
| Hemlock | 60 | -- | -- | 10 | 10 | 10 | 10 | 10 | 10 |
| Redcedar | 24,780 | 14,520 | 6,040 | 1,230 | 1,680 | -- | 1,310 | -- | -- |
| Total softwoods | 241,140 | 83,390 | 62,520 | 51,730 | 24,580 | 17,030 | 1,870 | 10 | 10 |
| Hardwoods: | | | | | | | | | |
| Select white oak | 651,590 | -- | 208,330 | 179,160 | 111,690 | 67,430 | 38,130 | 18,220 | 28,630 |
| Select red oak | 265,860 | -- | 47,050 | 50,130 | 44,650 | 44,590 | 12,120 | 33,540 | 33,780 |
| Other white oak | 303,050 | -- | 86,880 | 95,460 | 56,230 | 32,330 | 7,110 | 15,750 | 9,290 |
| Other red oak | 665,500 | -- | 161,910 | 146,660 | 129,800 | 66,550 | 45,430 | 36,790 | 78,360 |
| Hickories | 551,070 | -- | 204,820 | 129,410 | 114,960 | 42,340 | 25,450 | 18,490 | 15,600 |
| Hard maple | 146,040 | -- | 42,460 | 41,860 | 23,770 | 13,760 | 11,950 | 7,860 | 4,380 |
| Beech | 310,880 | -- | 49,160 | 56,100 | 61,540 | 45,350 | 23,530 | 30,010 | 45,190 |
| Black walnut | 48,840 | -- | 16,160 | 20,140 | 5,550 | 3,460 | 2,580 | 950 | -- |
| Ash | 129,300 | -- | 32,570 | 23,220 | 22,470 | 12,290 | 22,770 | 1,540 | 14,440 |
| Soft maple | 52,140 | -- | 17,190 | 10,170 | 6,510 | 9,690 | 8,580 | -- | -- |
| Sweetgum | 39,040 | -- | 13,230 | 6,810 | 5,630 | 7,960 | 5,410 | -- | -- |
| Blackgum | 104,290 | -- | 27,340 | 21,270 | 17,160 | 5,550 | 11,130 | 12,240 | 9,600 |
| Cottonwood | 12,520 | -- | -- | 4,330 | -- | 1,950 | -- | -- | 6,240 |
| Yellow-poplar | 433,460 | -- | 114,240 | 85,160 | 87,750 | 74,880 | 32,400 | 15,470 | 23,560 |
| Basswood | 9,030 | -- | 1,490 | 1,650 | 2,560 | -- | 3,330 | -- | -- |
| Other | 215,690 | -- | 65,380 | 50,550 | 28,570 | 21,380 | 18,830 | 18,910 | 12,070 |
| Total hardwoods | 3,938,300 | -- | 1,088,210 | 922,080 | 718,840 | 449,510 | 268,750 | 209,770 | 281,140 |
| All species | 4,179,440 | 83,390 | 1,150,730 | 973,810 | 743,420 | 466,540 | 270,620 | 209,780 | 281,150 |

* International ¼-inch rule.
† Softwoods only.

Table 13.--*Net annual growth on commercial-forest land by species and kind of material*
*Pennyroyal Unit, Kentucky, 1963*

| Species | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 1,070 | 680 | 390 | 4,280 | 1,280 | 3,000 |
| Other yellow pines | 3,420 | 2,010 | 1,410 | 16,920 | 9,170 | 7,750 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 1,550 | 1,260 | 290 | 4,520 | 880 | 3,640 |
| Total softwoods | 6,040 | 3,950 | 2,090 | 25,720 | 11,330 | 14,390 |
| Hardwoods: | | | | | | |
| Select white oak | 8,220 | 5,210 | 3,010 | 43,170 | 25,040 | 18,130 |
| Select red oak | 2,580 | 1,360 | 1,220 | 13,020 | 8,010 | 5,010 |
| Other white oak | 3,760 | 2,490 | 1,270 | 18,840 | 11,320 | 7,520 |
| Other red oak | 9,330 | 5,940 | 3,390 | 48,420 | 23,610 | 24,810 |
| Hickories | 8,110 | 5,940 | 2,170 | 34,770 | 21,620 | 13,150 |
| Hard maple | 2,610 | 1,960 | 650 | 9,840 | 7,620 | 2,220 |
| Beech | 1,870 | 790 | 1,080 | 12,250 | 9,580 | 2,670 |
| Black walnut | 860 | 530 | 330 | 3,900 | 1,890 | 2,010 |
| Ash | 2,350 | 1,770 | 580 | 8,960 | 4,770 | 4,190 |
| Soft maple | 1,730 | 1,430 | 300 | 6,180 | 3,100 | 3,080 |
| Sweetgum | 610 | 370 | 240 | 3,540 | 1,680 | 1,860 |
| Blackgum | 1,530 | 1,080 | 450 | 8,270 | 4,950 | 3,320 |
| Cottonwood | 90 | -- | 90 | 520 | 520 | -- |
| Yellow-poplar | 8,750 | 4,860 | 3,890 | 46,820 | 24,520 | 22,300 |
| Basswood | 140 | 90 | 50 | 720 | 720 | -- |
| Other | 6,200 | 4,700 | 1,500 | 20,920 | 14,800 | 6,120 |
| Total hardwoods | 58,740 | 38,520 | 20,220 | 280,140 | 163,750 | 116,390 |
| All species | 64,780 | 42,470 | 22,310 | 305,860 | 175,080 | 130,780 |

* International ¼-inch rule.

Table 14.--*Net annual growth on commercial-forest land by county and species group*
*Pennyroyal Unit, Kentucky, 1963*

| County | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwoods | Hardwoods | All species | Softwoods | Hardwoods |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Adair | 2,960 | 230 | 2,730 | 13,710 | 1,170 | 12,540 |
| Breckenridge | 4,580 | 280 | 4,300 | 22,170 | 1,310 | 20,860 |
| Bullitt | 3,390 | 230 | 3,160 | 16,590 | 1,160 | 15,430 |
| Casey | 4,950 | 260 | 4,690 | 24,030 | 1,220 | 22,810 |
| Clinton | 1,990 | 130 | 1,860 | 9,600 | 660 | 8,940 |
| Cumberland | 3,450 | 250 | 3,200 | 16,410 | 1,240 | 15,170 |
| Grayson | 3,410 | 390 | 3,020 | 15,430 | 1,330 | 14,100 |
| Green | 1,690 | 100 | 1,590 | 8,000 | 470 | 7,530 |
| Hancock | 1,560 | 90 | 1,470 | 7,510 | 410 | 7,100 |
| Hardin | 4,390 | 300 | 4,090 | 20,860 | 1,410 | 19,450 |
| Hart | 3,320 | 200 | 3,120 | 16,040 | 970 | 15,070 |
| Larue | 1,690 | 100 | 1,590 | 8,270 | 470 | 7,800 |
| Marion | 2,390 | 170 | 2,220 | 11,200 | 800 | 10,400 |
| Meade | 2,460 | 230 | 2,230 | 11,810 | 1,310 | 10,500 |
| Metcalfe | 2,730 | 200 | 2,530 | 13,010 | 860 | 12,150 |
| Nelson | 3,370 | 310 | 3,060 | 16,290 | 1,540 | 14,750 |
| Pulaski | 6,870 | 1,470 | 5,400 | 30,280 | 4,910 | 25,370 |
| Russell | 2,160 | 150 | 2,010 | 10,050 | 680 | 9,370 |
| Taylor | 2,140 | 130 | 2,010 | 10,410 | 620 | 9,790 |
| Wayne | 5,280 | 820 | 4,460 | 24,190 | 3,180 | 21,010 |
| Total | 64,780 | 6,040 | 58,740 | 305,860 | 25,720 | 280,140 |

* International ¼-inch rule.

Table 15.--*Timber cut from commercial-forest land by species and kind of material*
*Pennyroyal Unit, Kentucky, 1962*

| Species | Growing stock | | | Sawtimber |
|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** |
| Softwoods: | | | | |
| Shortleaf pine | 670 | 370 | 300 | 1,570 |
| Other yellow pines | 330 | 70 | 260 | 1,290 |
| Hemlock | -- | -- | -- | 10 |
| Redcedar | 630 | 380 | 250 | 1,280 |
| Total softwoods | 1,630 | 820 | 810 | 4,150 |
| Hardwoods: | | | | |
| Select white oak | 3,210 | 820 | 2,390 | 14,570 |
| Select red oak | 6,440 | 1,880 | 4,560 | 28,010 |
| Other white oak | 1,880 | 740 | 1,140 | 6,740 |
| Other red oak | 3,940 | 1,460 | 2,480 | 14,810 |
| Hickories | 3,700 | 1,850 | 1,850 | 10,420 |
| Hard maple | 520 | 80 | 440 | 2,990 |
| Beech | 2,920 | 160 | 2,760 | 18,960 |
| Black walnut | 220 | 10 | 210 | 1,510 |
| Ash | 490 | 90 | 400 | 2,640 |
| Soft maple | 320 | 10 | 310 | 2,040 |
| Sweetgum | 210 | -- | 210 | 1,340 |
| Blackgum | 220 | 10 | 210 | 1,410 |
| Cottonwood | 40 | -- | 40 | 240 |
| Yellow-poplar | 2,490 | 60 | 2,430 | 16,650 |
| Basswood | 130 | 10 | 120 | 810 |
| Other | 1,040 | 190 | 850 | 5,540 |
| Total hardwoods | 27,770 | 7,370 | 20,400 | 128,680 |
| All species | 29,400 | 8,190 | 21,210 | 132,830 |

* International ¼-inch rule.

Table 16.--*Timber cut from commercial-forest land by ownership and species group*
*Pennyroyal Unit, Kentucky, 1962*

| Ownership class | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwoods | Hardwoods | All species | Softwoods | Hardwoods |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| National forest | 190 | 100 | 90 | 1,020 | 460 | 560 |
| Other public | 40 | -- | 40 | 260 | -- | 260 |
| Forest industry | 290 | 20 | 270 | 1,860 | 80 | 1,780 |
| Farmer and miscellaneous private | 28,880 | 1,510 | 27,370 | 129,690 | 3,610 | 126,080 |
| All ownerships | 29,400 | 1,630 | 27,770 | 132,830 | 4,150 | 128,680 |

* International ¼-inch rule.

Table 17.--*Net annual desirable cut on commercial-forest land by species and kind of material*
*Pennyroyal Unit, Kentucky, 1963*

| Species | Growing Stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | Total | Poletimber trees | Sawtimber trees | Total | In sawtimber stands | In other stands |
| | *Thousand cu.ft.* | *Thousand cu. ft.* | *Thousand cu.ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Softwoods: | | | | | | |
| Shortleaf pine | 250 | 60 | 190 | 950 | 920 | 30 |
| Other yellow pines | 440 | 100 | 340 | 2,160 | 1,590 | 570 |
| Hemlock | -- | -- | -- | -- | -- | -- |
| Redcedar | 280 | 250 | 30 | 50 | 50 | -- |
| Total softwoods | 970 | 410 | 560 | 3,160 | 2,560 | 600 |
| Hardwoods: | | | | | | |
| Select white oak | 4,390 | 1,750 | 2,640 | 15,540 | 12,600 | 2,940 |
| Select red oak | 1,760 | 510 | 1,250 | 7,470 | 6,110 | 1,360 |
| Other white oak | 2,930 | 980 | 1,950 | 10,360 | 8,900 | 1,460 |
| Other red oak | 4,840 | 1,380 | 3,460 | 20,230 | 17,040 | 3,190 |
| Hickories | 5,580 | 2,610 | 2,970 | 17,260 | 12,330 | 4,930 |
| Hard maple | 1,540 | 820 | 720 | 4,250 | 4,070 | 180 |
| Beech | 1,970 | 390 | 1,580 | 9,370 | 7,830 | 1,540 |
| Black walnut | 450 | 180 | 270 | 1,420 | 850 | 570 |
| Ash | 1,530 | 660 | 870 | 5,160 | 4,850 | 310 |
| Soft maple | 510 | 290 | 220 | 1,290 | 740 | 550 |
| Sweetgum | 610 | 300 | 310 | 1,760 | 1,760 | -- |
| Blackgum | 590 | 220 | 370 | 1,950 | 1,840 | 110 |
| Cottonwood | -- | -- | -- | -- | -- | -- |
| Yellow-poplar | 3,070 | 1,090 | 1,980 | 11,540 | 8,550 | 2,990 |
| Basswood | 50 | 30 | 20 | 150 | 150 | -- |
| Other | 2,010 | 910 | 1,100 | 5,940 | 5,630 | 310 |
| Total hardwoods | 31,830 | 12,120 | 19,710 | 113,690 | 93,250 | 20,440 |
| All species | 32,800 | 12,530 | 20,270 | 116,850 | 95,810 | 21,040 |

* International ¼-inch rule.

Table 18.--*Net annual desirable cut on commercial-forest land by county and species group*
*Pennyroyal Unit, Kentucky, 1963*

| County | Growing stock | | | Sawtimber | | |
|---|---|---|---|---|---|---|
| | All species | Softwoods | Hardwoods | All species | Softwoods | Hardwoods |
| | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand cu. ft.* | *Thousand bd. ft.** | *Thousand bd. ft.** | *Thousand bd. ft.** |
| Adair | 1,380 | 30 | 1,350 | 4,560 | 80 | 4,480 |
| Breckenridge | 2,420 | 40 | 2,380 | 8,880 | 140 | 8,740 |
| Bullitt | 1,770 | 40 | 1,730 | 6,270 | 110 | 6,160 |
| Casey | 2,610 | 40 | 2,570 | 9,310 | 120 | 9,190 |
| Clinton | 1,020 | 20 | 1,000 | 3,760 | 60 | 3,700 |
| Cumberland | 1,720 | 30 | 1,690 | 6,030 | 90 | 5,940 |
| Grayson | 1,640 | 40 | 1,600 | 5,820 | 100 | 5,720 |
| Green | 900 | 20 | 880 | 3,180 | 40 | 3,140 |
| Hancock | 790 | 10 | 780 | 2,830 | 30 | 2,800 |
| Hardin | 2,240 | 40 | 2,200 | 7,970 | 120 | 7,850 |
| Hart | 1,720 | 30 | 1,690 | 6,260 | 100 | 6,160 |
| Larue | 900 | 20 | 880 | 3,300 | 50 | 3,250 |
| Marion | 1,190 | 30 | 1,160 | 3,980 | 60 | 3,920 |
| Meade | 1,200 | 40 | 1,160 | 4,280 | 130 | 4,150 |
| Metcalfe | 1,410 | 30 | 1,380 | 5,010 | 80 | 4,930 |
| Nelson | 1,710 | 50 | 1,660 | 6,200 | 150 | 6,050 |
| Pulaski | 3,550 | 330 | 3,220 | 13,070 | 1,270 | 11,800 |
| Russell | 1,060 | 20 | 1,040 | 3,410 | 50 | 3,360 |
| Taylor | 1,120 | 20 | 1,100 | 4,100 | 60 | 4,040 |
| Wayne | 2,450 | 90 | 2,360 | 8,630 | 320 | 8,310 |
| Total | 32,800 | 970 | 31,830 | 116,850 | 3,160 | 113,690 |

* International ¼-inch rule.

# THE AUTHORS

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